

EL DORADO COUNTY GENERAL PLAN

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Volume II Background Information



EL DORADO COUNTY
PLANNING DEPARTMENT

EL DORADO COUNTY GENERAL PLAN

Adopted by the

EL DORADO COUNTY BOARD OF SUPERVISORS

January 23, 1996

RESOLUTION NO. 10-96

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December 21, 1995

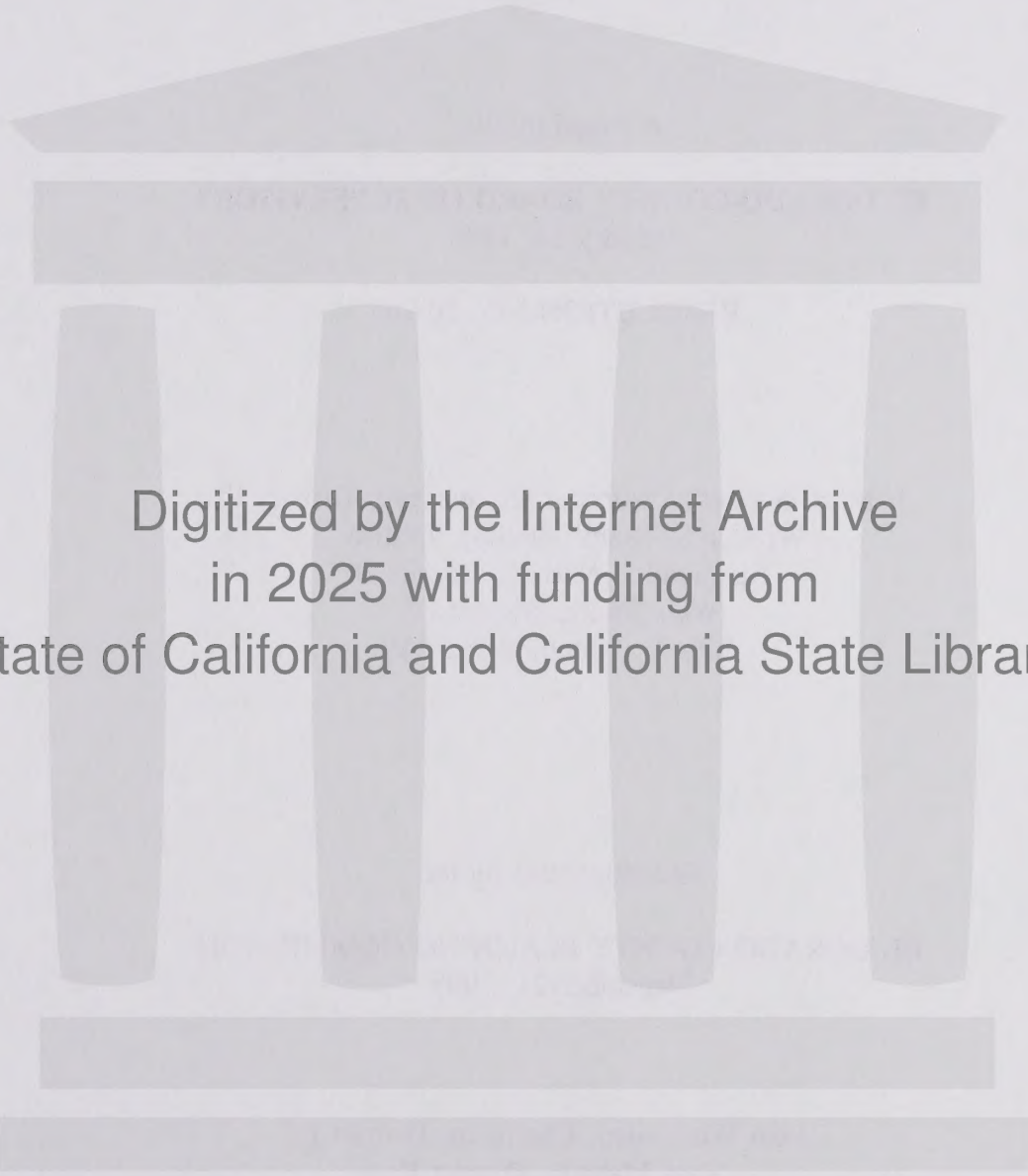
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Chapter 1

INTRODUCTION

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Chapter 1

INTRODUCTION

PURPOSE OF THE GENERAL PLAN

The El Dorado County General Plan is a long range statement of local public policy for the use of private and public land. The Plan provides a framework for encouraging economic development while managing growth, conserving agricultural lands, protecting the environment, developing effective and efficient public services, and preserving the County's rural character. It is intended to reflect the aspirations and visions of El Dorado County residents regarding the future character and form of their communities.

By State law, each city and county in California is required to prepare and adopt a General Plan. The subject areas that must be addressed in the General Plan include; land use, circulation, housing, open space, conservation, seismic safety, and noise. El Dorado County has elected to include the optional elements of Parks and Recreation, Agriculture and Forestry, Economic Development, and the Tahoe Basin. The primary function of the Plan is to allow the County to consciously consider and shape its own destiny by setting forth goals, objectives, and policies regarding each of these elements.

In addressing these subject areas, the Plan is general, comprehensive, long-term, and internally consistent.

The Plan is general in that it provides broad guidelines for development in the County rather than site-specific and detailed guidelines for the development of individual sites. The Plan's policies are carried out by regulatory tools such as zoning ordinances and subdivision ordinances. The Plan is intended to be flexible enough to allow public decision-makers and private individuals broad discretion in making land use decisions, yet rigid enough to ensure that the publicly defined goals and objectives are realized.

The Plan is comprehensive in that it addresses a wide range of issues that will affect the County's desirability as a place to live, work, and recreate. Not only are the issues of the Plan wide-ranging, but the Plan also covers all of the territory within the County's jurisdiction (the Western Slope as well as the Tahoe Basin). The Plan provides a means for the County to consider this wide range of concerns in an integrated and coordinated fashion rather than on a piecemeal basis.

The Plan is long-term in that it looks into the future to the year 2015. Because the Plan looks towards the future, it does not always reflect the current situation. The General Plan Land Use Map should not be confused with existing land uses. The Plan strives to look beyond current uses of the land and to describe the desired end-state in twenty years and beyond. In certain cases, this desired end-state may be vastly different than the current land uses show.

The Plan is internally consistent in that the goals, objectives, policies, and implementation strategies do not contradict one another but rather present a comprehensive and uniform program. The Plan contains eleven separate elements. There exists overlap among these elements when dealing with individual issues. Although approached from a different perspective within each element, the policy direction is consistent throughout.

The General Plan should not be seen as the final statement of the County's vision for the future. Over time, the population will change, goals will be re-defined, assumptions underlying the Plan may change; and the physical, social, and economic environment may become altered. At best, this Plan represents an aggregation of the attitudes, goals, and visions for the future as seen at this particular point in time. In order for the Plan to be a useful document and to respond to changing conditions, it must be periodically reviewed and revised.

CITIZEN PARTICIPATION

Citizen participation has played a key role in each phase of the development of this General Plan Update program. Four rounds of community workshops have been conducted during the program with each round of workshops held at six locations throughout the County. Each round of public workshops provided the participants an opportunity to discuss issues of concern among themselves in small working groups, to address large public gatherings, and to provide written comments to the County staff. All of the oral and written comments made by the public during this process have been documented and summarized in workshop summary reports. This input from the public has helped to shape and direct the results of the Plan.

An important component of the General Plan Update process was the appointment and recommendations provided by the Policy Advisory Committee (PAC). This fifteen member committee, appointed by the Board of Supervisors, represents a broad cross-section of the County population in both geographical and philosophical terms. The PAC met on a regular and formal basis nearly once a month during three years of this process and provided a forum for the expression of ideas and views on planning issues in the County. The PAC was most instrumental in drafting the County-wide Goals and Objectives Document which was the basis for all General Plan policies. The role of the PAC was that of an advisory rather than a policy-making body. The Board of Supervisors is the County's ultimate decision-makers with regard to the goals, objectives, and policies contained in the adopted General Plan.

RELATIONSHIP TO THE REGULATORY SYSTEM

State law provides local jurisdictions with a variety of implementation tools with which to implement the General Plan. These implementation tools must be based upon the policies of the Plan. Provisions of State law requires consistency between the General Plan and its implementation programs, as discussed below.

Zoning Regulation

Section 65860 of the California Government Code requires that the County's zoning ordinance be consistent with its General Plan. The various land uses authorized by the zoning ordinance must be compatible with the General Plan land use designations as well as the goals, objectives, policies, and implementation programs specified in the Plan. This Section also requires that when the General Plan is amended the zoning ordinance must likewise be amended to maintain consistency with the Plan.

Section 65566 requires that any zoning action by the County which acquires, restricts, or regulates the use of open-space land or any interest in such land must be consistent with the County's Open Space Element. Section 65567 requires that the County adopt an open space zoning ordinance consistent with the Open Space Element.

Section 65853 requires that the Planning Commission provide the Board of Supervisors with a written recommendation on any proposed zoning ordinance or amendments to an existing ordinance. This recommendation must include discussion of the relationship of the proposed ordinance or amendment to the General Plan.

Subdivision Regulation

Section 66473.5 provides that the County shall not approve a proposed subdivision map unless it finds that the subdivision, including its design and proposed improvements, is consistent with the General Plan. It is important to note that this requirement applies to subdivisions for which parcel maps, as well as tentative and final maps, are required.

Section 65567 requires that a subdivision map may not be approved unless it is consistent with the Open Space Element.

The County may require the dedication of land, the payment of in-lieu fees, or a combination of the two, for park or recreational purposes as a condition of approval of a final or parcel map. These conditions would apply if the General Plan contains a recreational element and the dedicated facilities conform to definite implementation measures and standards contained in the element (see Section 66477(d)).

The County may require the reservation of land within a subdivision for parks, recreational facilities, fire stations, libraries, or other public uses, provided such requirements are based on appropriate General Plan elements (see Section 66479).

Capital Improvements

Section 65401 authorizes the Board of Supervisors to require preparation and submission of lists of all public works projects recommended by County officials and agencies for study or construction during each ensuing year. This requirement also applies to special and school districts whose jurisdictions lie wholly or partially within the County. Upon submission to the Board of Supervisors, such lists must be integrated by the County into a coordinated program which must then be submitted to the Planning Commission for review as to its conformity with the General Plan.

Section 65402 requires review by the Planning Commission for conformity with applicable elements of the General Plan regarding:

- acquisition of lands for public purposes;
- disposition of lands;
- permanent street closures;
- authorization or construction of public buildings or structures; and
- the County Capital Improvement Program (CIP).

Building and Housing Codes

Section 65567 provides that building permits must be consistent with the Open Space Element.

The State Housing Law (Health and Safety Code Sections 17910 et seq.) requires the County to adopt regulations imposing uniform industry codes. This law also imposes special standards, which may be more burdensome than the uniform industry codes; designed to protect against certain types of hazards, such as fire, noise, earthquakes or unstable soils, and to achieve certain resource goals such as energy conservation. The County may adopt regulations and standards that vary from those mandated by the State Housing Law if justified by local conditions. Although not explicitly required by the State Housing Law, the General Plan is an especially appropriate vehicle for documenting local conditions and specifying the necessary regulatory response in order to justify variances from State law.

Environmental Impact Procedures

Section 15063(d)(5) of the California Environmental Quality Act (CEQA) Guidelines requires that the initial environmental study of a project consider compatibility with the General Plan. Section 15142(b) provides that an Environmental Impact Report (EIR) must discuss any inconsistencies between the proposed project and the General Plan. Appendix G(a) of the Guidelines states that a project will normally be found to have a significant effect on the environment if it will conflict "with adopted environmental plans and goals of the community where it is located."

Other Consistency Requirements

Listed below in summary form are other consistency requirements contained in State law which at some future date may apply to El Dorado County:

- Health and Safety Code (HSC) Section 33331, requires consistency between the General Plan and redevelopment plans.
- HSC Section 34326, requires consistency between the General Plan and housing projects.
- HSC Section 34711, requires consistency between the General Plan and housing for developmentally disabled, mentally disordered, and physically disabled persons.
- Streets and Highway Code Section 332503 requires consistency between the General Plan and parking facilities.

TIME FRAME

Section 65400 of the Planning and Zoning Law requires that after the legislative body has adopted all or part of a General Plan the planning agency shall provide an annual report to the legislative body on the status of the Plan and progress in its implementation, including the progress in meeting its share of regional housing needs determined pursuant to Section 65584.

A General Plan has a long-range time frame. It looks beyond the present and the immediate future to address some reasonable period of future time. Traditionally, general plans were end-state oriented; that is they projected an ultimate or desired land use pattern and established an anticipated date for its achievement. End-state general plans presented many problems, the most significant of which were unresponsiveness to changing conditions, and the difficulty of implementation. End-state plans have largely been replaced by plans using time frames of 10, 15, or 20 years.

The El Dorado County General Plan is a combined "end-state" Plan as well as a Plan based on a 20-year time frame. The land use pattern of this Plan reflects a desired end-state that is likely beyond the growth projections of the next 20 years. However, the policy direction of the Plan is based on a 20-year time frame for its implementation. To provide for flexibility and responsiveness to change, the Plan also requires a comprehensive periodic update. This will allow the Plan to always maintain at least a 15 to 20 year time frame.

It must be emphasized that periodic review of the Plan is not synonymous with total rewrite. Once adopted, the El Dorado County General Plan establishes a basic policy framework which should be followed over time. The purpose of reviewing the Plan every five years is to allow it to adjust in response to changing conditions, the availability of more recent data, and shifts in community values. Only under the most extraordinary circumstance, or the complete failure over a long span of time to periodically review the Plan, will a thorough and total rewrite be necessary.

USE OF THE PLAN BY LOCAL CITIZENS

The General Plan is designed to be used by elected and appointed County officials on a daily basis in making decisions with direct or indirect land use implications. It is also to be used by officials and staff of Federal, State and local government agencies and to provide a framework for interjurisdictional coordination of planning efforts. The Plan is designed for frequent consultation. Failure to use it will quickly cause it to become outdated and irrelevant.

County residents and property owners are anticipated to be major users of the Plan as it regards a particular geographic area or as it addresses a particular subject of interest. In either instance, the Plan must be used comprehensively and all objectives and policies must be viewed in the context provided through each element of the Plan.

The General Plan can be regarded on two levels. First, it is the local "constitution"; its policies reflect a vision for the future and prescribe the means for achieving that vision. Second, it is an educational and informational tool. The document contains the first comprehensive, County-wide analyses of land use, transportation, conservation, open space, agriculture and forestry, public health and safety, services and utilities, housing, recreation, and visual design in more than 20 years.

GEOGRAPHIC SCOPE

El Dorado County's location relative to the State of California is shown in Figure 1. The County map, or Planning Area is shown in greater detail in Figure 2. The map shown on Figure 2 provides the base on which most information in the Plan is presented. The Plan covers approximately 1,713 square miles. Included within the County but outside of its planning jurisdiction are the incorporated cities of Placerville and South Lake Tahoe, as well as the Eldorado National Forest, Bureau of Land Management lands, State Parks, and the Lake Tahoe Basin Management Unit of the Eldorado National Forest.

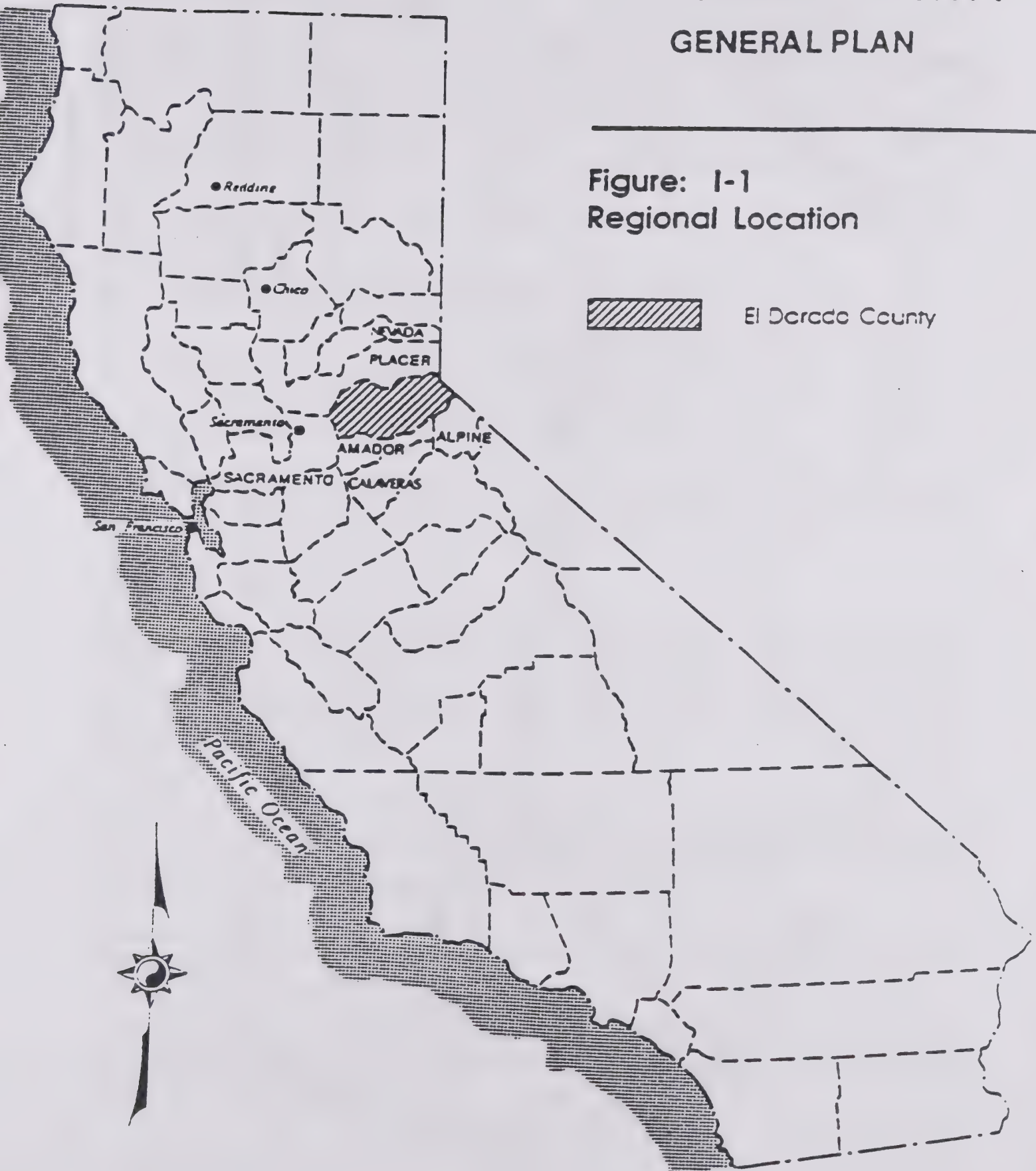
EL DORADO COUNTY

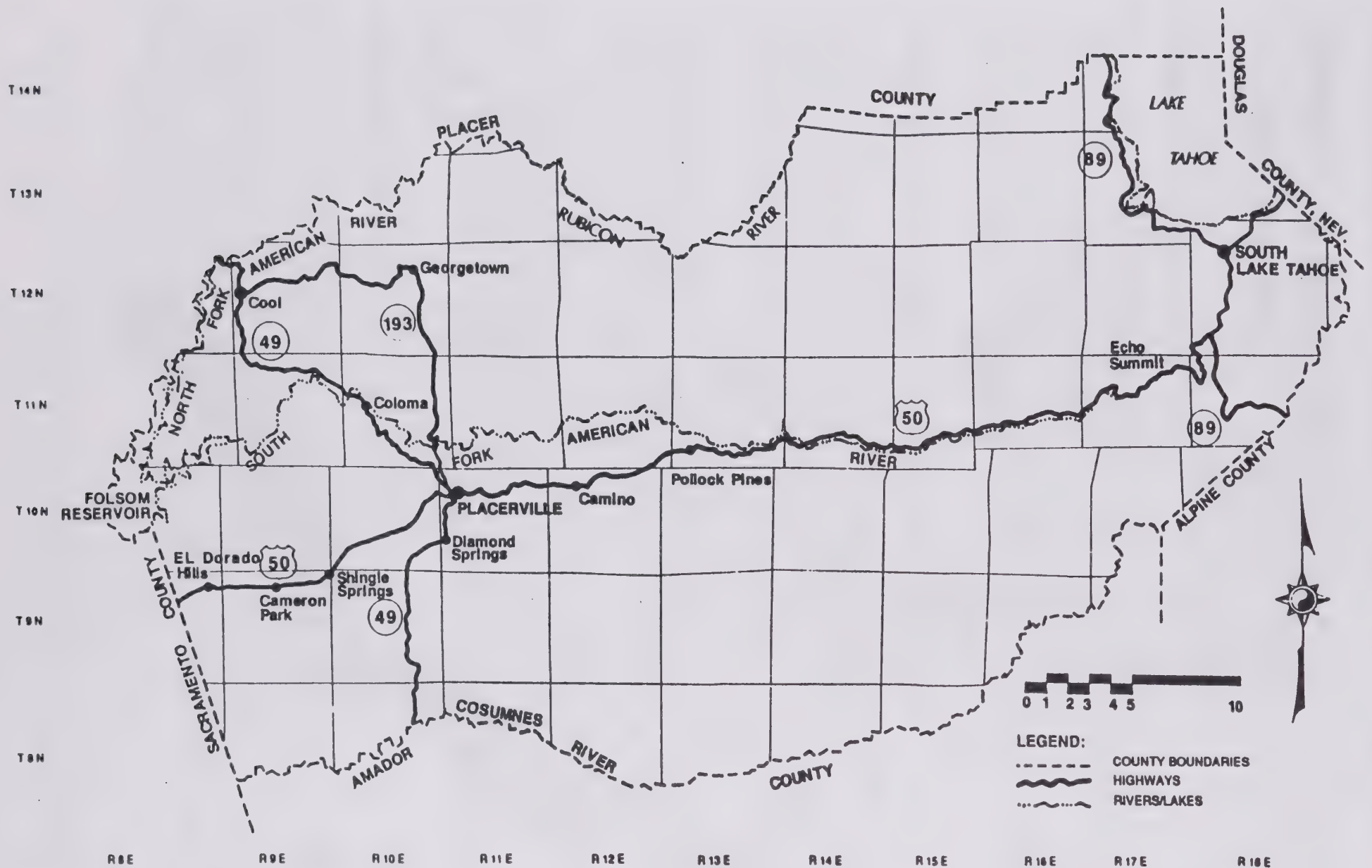
GENERAL PLAN

Figure: I-1
Regional Location



El Dorado County





EL DORADO COUNTY GENERAL PLAN

ORGANIZATION

The General Plan is divided into two volumes: Volume I, Goals, Objectives and Policies; and Volume II, Background Information . Volume I represents the General Plan and legal policy guide for all land use decisions in El Dorado County. Volume II does not contain policy, nor should any information therein be construed to imply policy. It is information that both supports and provides background for policies contained in each of the respective chapters or elements of Volume I. The background is provided to serve the following purposes:

1. Identify existing circumstances and background data that are relevant for each General Plan element;
2. To provide baseline condition information for the General Plan EIR;
3. To act as a general resource for the public and professionals interested in gaining basic information on the physical character of El Dorado County; and
4. To streamline the size of the policy portion of Volume I.

The background data report was further designed to update the Baseline Conditions Report dated July 1991. Much of the information provided herein is a duplication of the Baseline Conditions Report but is updated where new information is available.

CONTENT OF THE PLAN

The General Plan is organized into eleven chapters. The Introduction chapter is followed by ten chapters, referred to as "elements". The elements pertain to particular topics such as land use or circulation. Each element contains its own table of contents, introduction, discussion of background, information (Volume II) and policy section (Volume I). Each element discusses the following topics:

Chapter 2: Land Use. The Land Use Element discusses the location and extent of land use throughout the County that is necessary to preserve the County's rural lifestyle, encourage economic development, make the most efficient use of existing public services and utilities, and recognize the importance of natural resources and open space.

Chapter 3: Circulation. The Circulation Element sets forth a comprehensive strategy for planning, developing and maintaining a County-wide transportation system. This system is comprised of arterial roadways, bikeways, aviation, and transit.

Chapter 4: Housing. The Housing Element sets forth policies and programs to provide a means that suitable housing opportunities are available for all residents of the County regardless of income, race, sex, or religion.

Chapter 5: Public Services and Utilities. This element addresses the issues of water supply, wastewater collection and treatment, storm drainage, solid waste, utility services, emergency services, schools, libraries, and cultural facilities. Many of these services and utilities are provided by independent districts and are outside of the jurisdiction of the County. The element discusses necessary coordination with these districts and other providers.

Chapter 6: Public Health and Safety. The Public Health and Safety Element sets forth planning strategies for the State mandated seismic safety and noise element as well as fire hazards, flooding, hazardous substances, air quality, airport safety, and highway safety.

Chapter 7: Conservation and Open Space. The Conservation and Open Space Element contains provisions for the conservation of soils, minerals, water, wildlife and fisheries, historic and prehistoric resources, energy, and open space. This element meets the State requirements for both the Conservation and the Open Space Elements.

Chapter 8: Agriculture and Forestry. Issues covered in the Agriculture and Forestry Element include the preservation of agricultural land, agricultural production, the agricultural economy of the County, the preservation and conservation of forestry resources, and the forest economy.

Chapter 9: Parks and Recreation. The Parks and Recreation Element addresses the current status of recreation facilities, the acquisition and development of additional park lands, the provision of trail systems, the conservation and promotion of waterways for recreational use, coordination with other recreation providers, the securement of funding, and opportunities to increase recreation-related tourism.

Chapter 10: Economic Development. The Economic Development Element seeks to provide opportunities for economic growth, self-sufficiency, and sustaining a sound economic base while maintaining environmental quality.

Chapter 11: Tahoe Basin. The Tahoe Basin Element reflects the unique political and physical circumstances that exist with respect to the Tahoe Regional Planning Agency (TRPA) and the Lake Tahoe Basin.

HISTORY OF LAND USE PLANNING IN EL DORADO COUNTY

First General Plan

The El Dorado County Planning Commission was organized in 1949, but it was not until October 1957 that the County Planning Department was established.

In response to the rapid urbanization of certain areas, El Dorado County prepared General Plans for specific areas instead of one comprehensive plan serving the entire County.

The Lake Tahoe area in the late 1950s and early 1960s experienced a high rate of growth. The accompanying problems deemed it necessary that immediate attention be given to the southern part of Lake Tahoe, which accounted for the preparation by the Planning Department, and adoption on May 2, 1960 of the first General Plan in El Dorado County.

Next, the City of Placerville and El Dorado County jointly applied for a 701 Planning Grant to prepare a General Plan for Placerville and vicinity which was adopted by both the City Council and Board of Supervisors on December 3, 1962.

This was followed by the adoption on May 24, 1965 of the Lake Tahoe 1980 Regional Plan which again was prepared under a 701 Planning Grant and included the entire Lake Tahoe Basin.

Next came an application by the County for another 701 Planning Grant to prepare General Plans for the following urbanizing communities: Georgetown and vicinity, adopted September 6, 1966; Shingle Springs and vicinity, adopted January 30, 1967; Diamond Springs/El Dorado, adopted January 30, 1967; and Camino-Pollock Pines, adopted September 25, 1967. This grant also included the preparation of a Preliminary General Plan which was never adopted. All Plans have been implemented to a great extent by precise zoning and adherence to the Plans' adopted goals and development policies.

1969 General Plan

The adoption of the 1969 El Dorado County General Plan in August 1969 represented a more comprehensive approach for the County. It combined all required elements of concern, particularly land use, transportation, recreation and public facilities. A land use map, commonly known as "The Dead Sea Scrolls", was adopted encompassing the entire County.

El Dorado County Area Plans

El Dorado County's primary planning tools from 1975 through 1993 for establishing land use and development policies were the 24 separate Area Plans. These Area Plans represent updates to the 1969 Land Use Element of the County General Plan. Each of the 24 Area Plans was prepared by the El Dorado County Planning Department and a citizens advisory committee from that particular area. The first of these Area Plans, the American Flat/Spanish Flat/Bear Creek Area Plan, was adopted in October of 1975. This relatively short, 18 page document contains a policy statement by the citizens committee which states that "the desires and objectives of a given geographical area can best be understood and interpreted by those people living in that area." The primary effect of this Area Plan was to reduce the amount of potential development allowed under the 1969 General Plan. The reduced development potential represented a future population density more reflective of the rural character the community desired.

Recognizing the influence that local residents could have in shaping future development policies within their community and preserving their rural lifestyles, the communities of Greenwood, Rescue, Shingle Springs, and Pleasant Valley soon prepared Area Plans of their own. The need for these early plans was cited as: 1) rapid population growth within the area; 2) large numbers of recent land divisions; 3) the creation of new, large subdivisions; and 4) significant growth-inducing projects (such as the creation of a new sewer district or proposed water development projects). In each of these early area plans, the General Plan update process was used to reduce allowable densities from those permitted under the 1969 General Plan.

Other individual communities throughout the County prepared area plans in an effort to more closely correlate land use and development policies with the goals and desires of local residents. With the adoption of the Camino/Fruitridge Area Plan in May of 1985, virtually every community on the Western Slope of the County had prepared an area plan. Although many of these area plans continued to cite rapid population growth and land division/subdivision issues as the reasons for preparing the plan, many new issues and needs arose. Additional reasons included: 1) limitations on water supplies to support new development; 2) increase traffic congestion and deficient roadway systems; 3) an attempt to more closely match land use policy with the land capability; 4) a desire for efficient, planned growth; 5) plans for developing new communities; and 6) a growing awareness of the legal requirement for consistency between the County General Plan and the Zoning Ordinance.

Long Range Land Use Plan

The Long Range Land Use Plan was prepared to provide a general pattern for land use development in the County over a 20 year period extending to the year 2000. The Long Range Plan and the policies it contains were intended to act as a guide for the Area Plans and to regulate proposed amendments to the Area Plans. The Long Range Plan divided the County into three major land use classifications: agricultural lands, urban lands, and rural residential lands. Each of these land use classifications were described and a set of generalized policies developed.

The policies of the agricultural land use category are intended to protect and preserve the existing and potential agricultural lands of the County. Agricultural lands were measured for suitability through "The Procedure for Evaluating the Suitability of Land for Agricultural Use" which was located in Appendix 2 of the Long Range Plan. An updated procedure is contained in Appendix A of Volume II.

The urban lands are those designated or used for industrial, commercial, multifamily residential, and high and medium density single family residential use. Lands which are considered for future urban use are those which have available public water and sewer service, are located within a fire protection district, have available telephone and electrical system, and have immediate access to the State and County road system. The policies relating to urban lands are intended to encourage a consolidation of intensive land uses into "urban clusters" to provide cost-effective infrastructure and public services and to discourage dispersed urban growth.

The rural residential lands of the County are typically transitional lands between agricultural and urban land uses. These lands are not intended to be provided with urban services such as water and sewer systems. Rural lands are also frequently located within wildlife habitat and migration corridors. The development policies relating to rural lands are intended to discourage the extension of public services and protect wildlife habitat.

EL DORADO COUNTY GENERAL PLAN UPDATE (1991-1994)

Since the adoption of the first area plan in 1975, El Dorado County has experienced a high population growth. In 1980, the County's population was approximately 87,700. By 1990 the population was 124,730, a 70 percent increase. Although the Area Plans attempted to curtail or manage this population growth, the population grew at a much faster rate than expected. The anticipated 20 year buildout of many plans were realized in half that time or less. The large number of General Plan amendments which have been proposed and approved over the past several years have dramatically changed the pattern of land use from that which was originally planned for in the Area Plans. For these and many other reasons, many of the goals and policies presented in the Area Plans have become outdated or obsolete.

The need for a new General Plan which is more responsive to the urbanizing nature of the County was clearly demonstrated by the numerous requests for General Plan amendments. Thirty to forty General Plan amendment requests were being accepted annually by the Planning Department. In order to process these requests, the County adopted the Long Range Land Use Plan for guiding and regulating the General Plan amendment requests. State law allows for the General Plan to be amended periodically, but the processing of numerous General Plan amendments was not an efficient method to implement a General Plan. This amendment process resulted in an internally inconsistent General Plan.

In summary, the El Dorado County General Plan Update was conducted to:

1. Accurately reflect the urbanizing nature of the County;
2. Clearly establish land use and development policies reflecting goals and objectives of County residents;
3. Minimize the need for General Plan amendments; and
4. Insure internal consistency between each of the General Plan elements.

PERCEPTION OF MAJOR PLANNING ISSUES

Through a process of personal interviews, public meetings, and survey questionnaires, the General Plan Team has acquired a fairly broad understanding of the major planning issues facing El Dorado County. The new General Plan will be designed to respond to each of these issues with an overall Plan for issue resolution and a list of goals, objectives, and policies to implement the Plan. The major issues are listed as follows.

Land Use and Development Issues:

1. Growing process of urbanization.
2. Preservation of rural character.
3. Maintaining unique community character.
4. Clustered, high intensity development versus scattered, low intensity development.
5. Lack of an up-to-date land use inventory.
6. Economic development of the County through the creation of new job opportunities.
7. Interface between the County and the U.S. Forest Service, TRPA, State Parks, and the Cities of Placerville and South Lake Tahoe.
8. Appropriate density and grading requirements on hillsides and steep sloped areas.

Growth Management and Infrastructure Availability Issues:

1. Development of new water supply sources.
2. Capacity of water distribution facilities to accommodate new growth.
3. Capacity of wastewater collection and treatment facilities to accommodate new growth.
4. Potential water quality problems from increased septic system use.

Transportation and Circulation Issues:

1. Maintaining an acceptable level of service on County roadways.
2. Identification and financing of necessary roadway improvements.
3. Defining the role of Transportation Systems Management (TSM) and alternative modes of transportation.
4. Maintaining a scenic corridor along U.S. Highway 50.

Open Space, Conservation, and Resource Management Issues:

1. Preservation and protection of agriculture and agricultural lands.
2. Protection of ridgelines, hillsides, and other important open space characteristics.
3. Management and productive development of mineral and timber resources.
4. Preservation of wildlife habitat and migration corridors.

Public Safety and Hazards Issues:

1. Potential occurrence of major fires.
2. Exacerbation of fire hazards by new development within forested areas (urban interface).
3. Lack of a uniform fire code or established fire prevention standards.
4. Seismic hazards and landslides.

Housing Issues:

1. Decreasing supply of affordable housing.
2. Ineffective implementation of existing housing programs.

Recreation Issues:

1. Lack of County park facilities, especially parks which are oriented towards the needs of urban communities.
2. Access to the South Fork of the American River for recreational rafters.
3. Impacts of expanded recreational facilities within the Eldorado National Forest to the County.

Lake Tahoe Issues:

1. Coordination and consistency with TRPA plans and ordinances.
2. Establishing El Dorado County's position regarding future transportation improvements within the Tahoe basin.
3. Assuming a greater role in processing development permits within the Tahoe basin.
4. Unattractive visual appearance of the Meyers community as the gateway to Tahoe.

Implementation and Financing Issues:

1. Need for a consistent set of land use policies and regulations.
2. Inefficient project review process.
3. Infrequent preparation of Environmental Impact Reports.
4. Fee collection - should new development realistically "pay its own way."
5. Defining the role of assessment districts and community service districts in the provision of public services.
6. Integrated capital improvement program consistent with the Plan.

TABLE 1-1
PLANNING DOCUMENTS PREPARED IN SUPPORT OF THE GENERAL PLAN

In March 1989, the Board of Supervisors determined it was necessary to update all elements of the General Plan as a means to ensure internal consistency between the various elements/plans as well as consistency with other State mandates. The following summarizes significant events occurring after that date leading to eventual adoption of the updated General Plan.

	Prepared/Approved
Contract, Work Program, Schedule, and Budget for El Dorado County General Plan	August 1989
Reconnaissance Report	December 1989
Summary of Comments: Round I Community Workshops	August 1990
Fairgrounds Site Analysis Study	October 1990
Alternative Concepts Report	December 1990
Summary of Comments: Round II Workshops	March 1991
Baseline Conditions Report	July 1991
Assessment of Candidate (Fairground) Sites	August 1991
Preserve Site Strategies for Rare Plants	November 1991
Goals and Objective Statements	December 1991
Summary of Comments: Round II Community Workshops	March 1992
Draft Policy Framework Document	February 1992
Special Study Workshops Report	May 1992
Draft Scenic Highways Ordinance	June 1992
Housing Element Adopted	August 1992
Conceptual Land Use Plan	August 1992
Summary of Comments: Round IV Community Workshops	September 1992
Administrative Draft General Plan	October 1992
Technical Assessment of Conceptual Land Use Plan - Economic Evaluation	October 1992
First Administrative Draft 2010 General Plan	October 1992
Addendum Report to the Technical Assessment of the Conceptual Land Use Plan	December 1992
Second Administrative Draft General Plan	July 1993
Second Administrative Draft 2010 General Plan, Volume I; July 1993	July 1993

TABLE 1-1
PLANNING DOCUMENTS PREPARED IN SUPPORT OF THE GENERAL PLAN

In March 1989, the Board of Supervisors determined it was necessary to update all elements of the General Plan as a means to ensure internal consistency between the various elements/plans as well as consistency with other State mandates. The following summarizes significant events occurring after that date leading to eventual adoption of the updated General Plan.

	Prepared/Approved
Second Administrative Draft General Plan Land Use Maps	
Rational for Utilizing Multiple Land Use Designations Within the Rural Regions as Proposed in the Second Administrative Draft General Plan	September 1993
Variable Density in Rural Regions - Fiscal and Economic Impacts of the General Plan Land Use Plan, EPS	September 1993
Third Administrative Draft General Plan (Annotated), Volume I; October 1993	October 1993
"2A" Administrative Draft General Plan Planning Commission Minority Report	October 1993
Third Administrative Draft General Plan (Unannotated) Volume I; November 1993	November 1993
Population and Employment Forecast El Dorado County General Plan Update	November 1993
General Plan: Project Description, Volume II	December 1993
Public Review Draft (Interim Draft)	December 1993
General Plan Project Description, Volume II	January 1994
General Plan Alternative	January 1994
Fiscal and Financial Feasibility Analysis of Draft General Plan - 2015	October 1994
Public Review Draft General Plan	December 1993
General Plan Draft EIR	December 1994
General Plan Final EIR	-----
Certification of General Plan Update Final EIR	-----

Chapter 2

LAND USE

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Chapter 2

LAND USE

EXISTING LAND USE

Historical Influence

El Dorado County is comprised of numerous distinct areas. The most prominent division within the County is the separation between the Western Slope and the Eastern Slope/Tahoe Basin of the Sierra Nevada which is the Great Basin-Pacific Watershed Divide. Dramatic changes in elevation and climate and the large National Forest landholdings between the two sides of the mountain range have had a significant affect on the development pattern of the County. U.S. Highway 50, running east to west, bisects the County and has also had a profound influence on development patterns. The two incorporated cities in the County, Placerville on the Western Slope and South Lake Tahoe in the Tahoe Basin, lie along U.S. Highway 50. Development and population growth is concentrated on the Western Slope along the U.S. Highway 50 corridor where winters are temperate and topographic changes are less extreme.

Much of El Dorado County's rural character is derived from its existing communities, many of which were founded following the discovery of gold at Sutter's Mill at Coloma in 1848. Throughout the late 1800s, boom towns appeared throughout California's Mother Lode area. Some of these boom towns have disappeared while others continue to flourish. Many former boom towns contain historical structures, sites, and development patterns reminiscent of the early frontier days.

Historically, towns in El Dorado County contained a mix of land uses in close proximity to each other. More recently, development has occurred which is more suburban in character where land use types are functionally separated. Some of this development has occurred adjacent to or as a part of existing communities, while other residential developments are isolated and are neither functionally or physically integrated into an existing community.

Following is a partial listing of some existing communities founded during the Gold Rush period.

American River Canyon and Communities. Generally located within the American River Canyon along U.S. Highway 50 from Pollock Pines east to Twin Bridges. The American River Canyon Communities include (from west to east) Fresh Pond, Riverton, Whitehall, Silver Fork, Kyburz, Strawberry, Mt. Ralston, and Phillips.

The story of the American River Canyon is as colorful as the gold country of the foothills. It is filled with famous names of the past, hard work, extremes in weather, and very rugged country. Those who lived in the Canyon during the 1800s lived with danger everyday, but they also knew the beauty of the Dogwood in bloom and the brilliant colors of a Maple tree in the fall. The history of the American River Canyon is heavily intertwined with the function that the Canyon area served then, and serves now, as a transportation corridor.

The American Indians were the first people to pass through this rugged land. They picked the berries, seeds and acorns, and hunted small animals. When they moved down to the warmer elevations in the fall, they burned the brush and undergrowth to encourage revegetation of the area. Because these Indians were few in number, they left a small impact on the Canyon area; the grinding stones and various midden sites from Riverton to Kyburz area the only lasting scars of this early habitation. ...

In the early 1800s, Jedediah Smith made two journeys through the Sierras. He passed through the American River Canyon in 1828 and named the river the Wild River. His name for this great river did not remain on record because a Spanish Land Grant had it named the Rio Ojotska. In 1833, the river became known by its Spanish name.

Eventually, the name of American River was coined by John Sutter and was used on the Wilkes Map in 1841. The story is told that John Sutter "Americanized" the Spanish-Indian name of "El Paso de los Americanos" which had been the name used by the local Indian for many years. They had seen Canadian trappers (Americanos to them) cross the river at the same point year after year, hence the name "the place of the Americanos."

Once Sutter's new name for the river was told to miners and travelers, it was spread and accepted all over the State. Years later, it was still on the Federal maps as Rio Ojotska, but it had been commonly accepted as the American River in California.

With the discovery of gold in 1848 at Sutter's Mill, there was a great rush of people and supplies over the Sierra Mountains. There were few roads crossing the high passes; most were only paths which had been widened to allow some wagons through. With the great boom, these roads were widened and improved to allow for the massive movement of men and materials over the Sierras. All of these many roads were rough, dangerous, and privately owned toll roads.

One of the earliest and most famous of these roads in the plan area was Johnson Road. It began as a shortcut for pack trains and travelers from Carson to Placerville. Its chief advantage was a lower elevation which allowed for relative freedom from snow in the winter.

As time passed, the route was extended and in July of 1857, Johnson Road became the primary route for the Overland Stage. Passengers and mail came from Salt Lake City to Placerville via Genoa along this series of private roads.

The road itself was designated the "Placerville Road" in 1858 by the State, but little revenue was appropriated for improvements. Consequently, contracts were let out to private persons to collect tolls, widen the road, and maintain it for safe passage. As word spread of the amount of time saved traveling this route, the volume of people and material increased.

The road became passable by freight wagons and stagecoaches on a regular schedule. The stagecoach passengers frequently arrived at their destinations battered and shaken by their trip but for the first time were able to plan on an arrival date and time. The legend of Hank Monk was begun in the American River Canyon by Horace Greeley after taking one of these infamous rides to Placerville.

Now that the roads were passable most of the year, there were to be many significant changes.

One improvement was the Overland Pony Express which came into being in April 1860. In the past, it had taken a minimum of 21 days to transport the mail from New York City to Sacramento by boat, train, and stagecoach. These famous endurance riders went from St. Joseph, Missouri to San Francisco via Salt Lake City, Carson City, Placerville, Folsom, and Sacramento and established a record of delivering the mail from New York City to Sacramento in nine days. However, the Pony Express was only to last a year and a half before the telegraph line was completed from New York to San Francisco.

In the early 1860s, the Canyon was a congested and busy area. Traffic was slow moving, the roadway was deeply rutted and dusty, and there were several dangerous points along the route. Occasionally, there were establishments which provided for food and lodging, livery stables, and supplies. Some stations were set up for specific teamster companies, others for stage lines and still others for the pony express riders. From these small inns and stage stops came the small towns that exist in the Canyon today.

Whitehall was an inn that had a lobby and club room downstairs and sleeping rooms upstairs. In River Side (Riverton), the Brockliss Inn was known as a beautiful hotel built at the edge of the river which had elegant meals, expansive verandas, and advertised as having fishing from the rooms. Strawberry also boasted of a fine hotel with elegant dining and was a toll station for the turnpike east. The teamsters from Virginia City were housed at Silver Fork. The Sugar Loaf House was a remount station for the Pony Express and later a teamster and stage stop. There were several more stations and houses where food and a bed could be bought in the Canyon for there was a large mobile community to be serviced.

The Canyon smelled of dust, manure, and smoke from the campfires and wood stoves. The creaking wagons, snorting oxen and horses, and the humming of the new telegraph lines all were a part of this great area.

It was a time of great changes and prosperity. One source said it was a time ". . . when the thorough brace stages and high-wheeled freighters of the Pioneer Stage Line required 50 men and 600 horses for the service between Placerville and Carson and Virginia Cities. In the year 1862, 30,000 tons of freight and 36,500 passengers traveled this mountain road with an

estimated yearly business for the operating company of more than \$4,000,000." (*California Highways and Public Works, Centennial Edition, 1850-1950, Office Journal of the Division of Highways, Department of Public Works, California, Page 11.*)

This prosperity was to fade soon from the canyon area with the coming of the Central Pacific Railroad passing through the Sierras to the north along Donner Pass. The railroad brought both passengers and freight that would have previously traveled through the American River Canyon. The roads became used only for local traffic and many of the establishments were closed.

With the approval of the Canyon Route for the first State highway in California in 1895, the travelers and commerce once again came to the area. The towns of Fresh Pond, Riverton, Kyburz, and Phillips were to be revived but never to the glory of the past.

Although it had been declared a State highway in the 1860s, there were five improvements made on the roadway. The first work completed was an 80-foot stone bridge over the South Fork of the American River at Riverton. The bridge was made of hand-hewn granite blocks in an arched span, patterned after the Roman aqueducts.

There were several small additions of culverts and some small bridges, but the roadway was to remain a dirt road until the mid-1920s. Imagine the dusty, bumpy ride folks had to endure in the new Ford Model T. It was a scenic trip, with frequent stops to cool down the motor and refill the radiator.

After the roadway was paved and the grade improved at Slippery Ford (Kyburz), motorists used this as a primary route over the Sierras. It was not until the casinos and resorts were built at Lake Tahoe in the 1950s and 1960s that large numbers of people passed through the canyon again.

This American River Canyon has always been important as a transportation route for providing the services to the mobile community. It has a past to be proud of. It was the prime route for the Overland Stage, the Overland Pony Express, the first transcontinental telegraph line, and also the first State highway in California.

Coloma. Located eight miles north of Placerville. State Route 49 bisects Coloma. The South Fork of the American River is adjacent to the town. The community is currently popular for river rafting and camping activities and is also known for the James Marshall Gold discovery State Historic Park, which is administered by the State Department of Parks and Recreation. Most of Coloma, whose name is derived from the Nisenan Indian language, is within the State Park. The Coloma gold strike at Sutter's Mill started the famous "California Gold Rush" of 1849. After the gold rush, orchards and winery activities maintained the economy into the 20th Century. Problems with insects and increased competition reduced agricultural activities which caused the population to drop to less than 400 during the 1920s. Tourism and historical interest have revitalized the community.

Cool. Located 17 miles north of Placerville or four miles south of Auburn. State Route 49 bisects Cool. State Route 193 enters from the east (Greenwood, Georgetown area) and junctures at Cool. Cool is the major crossroad and commercial node in the northwest portion of the County. Commuters from the Cool area generally travel to Auburn. Cool was once a stage stop on the Auburn-Georgetown Road. Many of the historic buildings which were viewed by passengers in stagecoaches during the time of the Gold Rush are still in use today.

Diamond Springs. Located two miles south of Placerville. State Route 49 from Placerville turns westward in Diamond Springs. Pleasant Valley Road is the main east-west road, and doubles as Route 49 through the town. Missouri Flat Road is the major connector road between U.S. Highway 50 and Pleasant Valley Road/State Route 49. Park West and the Diamond Springs Industrial Park are developed industrial locations adjacent to Diamond Springs. Located on the Old Carson Emigrant Trail, Diamond Springs was named in 1849 for its crystal clear water. Historic buildings include the Wells Fargo Express office and the Louis LePetit store which were built in 1857. On a hill above the town stands the I.O.O.F. Hall, which was built in 1852 and is the oldest such hall in continuous use in California.

El Dorado. Located two miles west of Diamond Springs on Pleasant Valley Road/State Route 49. From El Dorado, State Route 49 travels south to Amador County. Poor Red's, the County's most famous restaurant and bar, is located here. West of El Dorado is the "Wye" where Pleasant Valley Road meets Mother Lode Drive. Founded in 1855 and located on Pleasant Valley Road, El Dorado was a rich placer- and quartz-mining area. A few early buildings survive including M.D. Hingman's Physicians Office and Drugstore, and the 1857 Wells Fargo Express office, now the fire station.

Fairplay. Presently located on Fair Play Road off of Mt. Aukum Road, approximately seven miles south of Pleasant Valley. The name "Fairplay," originally spelled "Fair Play," may have originated in 1853 when someone appealed for a "fair play" during a fight between two men. Fairplay served the gold and copper mines of the area including the Cosumnes Copper Mine and the Crystal Mine. In the 1880s, mining activities gave way to agricultural activities which are still the predominate activity in the area. Old Fairplay is located near Perry Creek, not at its present site.

Garden Valley. Located approximately two and a half miles south of Georgetown on Marshall Road and along the intersection of Garden Valley Road. The following history of Garden Valley was provided by the personnel of the Garden Valley Fire Department. The original author is unknown.

Garden Valley was first called "Johntown" after a German emigrant called "Dutch John" who first settled in the area in 1849.

A few years later, the name was changed to Garden Valley. This suggestion was made at a Fourth of July celebration picnic and dinner at which the tables were supplied with vegetables grown "in the valley along the creek." However, the name "Garden Valley" did not come into immediate use until the first post office was established December 16, 1852, with Thomas McConnell as its first Postmaster.

At first, the settlement was in two parts known as upper and lower Johntown. The upper part was located near the junction of Johntown Creek and Manhattan Canyon. The main or lower part of the settlement was at the junction of Georgetown and Long Valley Road.

In 1857, a fire destroyed most of the business area which at the time consisted of thirteen stores, six hotels, several saloons, and other business establishments.

The best known and producing mine of the immediate area was the Taylor which no longer exists. Next came the Rosencrante and Black Oak Mine which at a much later date, was mined with great success until the ore vein was lost and could no longer be mined profitably.

Georgetown. Located along State Route 193, 12 miles east of Cool and 15 miles north of Placerville. Georgetown is named in honor of George Phipps who founded the town in 1849. Following a disastrous fire in 1852, the citizens rebuilt the town with unusually wide streets to prevent further blazes from spreading. Several historic buildings are located in the town including the Whiteside Theater (now Odd Fellows Hall) built in 1869, the Shannon Knox House, Georgetown Hotel, and the American River Inn.

Gray's Corner. Located approximately five miles south of Pleasant Valley on Mt. Aukum Road.

Greenwood. Located four miles west of Georgetown on State Route 193. Founded in 1849 by John Greenwood, son of the famous mountain man, Caleb Greenwood. The town is accessed by State Route 193. Buildings of historical interest, dating from 1850-51, are the "Wish-Ton-Wish" Bowling Saloon, the Verandah, the Greenwood Cottages, and the Old Kentucky Exchange. The Nagler Hydraulic Mine, the Cederberg Mine, and the Bower Mine are all located north of the town.

Grizzly Flat. Located on Grizzly Flat Road, approximately eight miles east of Somerset. Gold was discovered here by Buck Ramsey in 1850. Mr. Ramsey, having dinner with friends, shot and killed an attacking grizzly bear. He found the dead bear next to a big gold nugget, bringing the gold rush to the local area. The Mt. Pleasant mine was established later that year.

By 1852, Grizzly Flat was a boom town. Saloons, stores, a hotel, boarding houses, and many homes dotted the hillside. Population was about 1,000. In 1855, the Grizzly Flat Post Office opened and a Catholic church and Masonic Hall were built. A Methodist church was erected in 1857. Population was 2,000 in 1860.

In 1866, a fire destroyed much of the town but was rebuilt. The Mountain School was built in 1867. In 1869, another fire destroyed the town, and again it was rebuilt.

In the 1880s, the town's commercial businesses included seven saloons, two groceries, a mercantile store, butcher, and livery stable. Three gold mills were working, and the population was about 2,000. Lumbering began nearby, and a school was built near Baltic Peak. Telephone service arrived in 1890.

By the turn of the century, population had decreased to 500, and ten years later it was only 150. The Mt. Pleasant mine was closed in 1914.

During the 1920s, most people worked in lumbering, only a few miners remained. Baltic School was closed in 1929. Two saloons and a store operated in 1937. The hotel had burned in 1936. After the war, the Hazel Creek Mine was reopened and worked from 1948-1958. Today, some of the original buildings remain and are occupied.

Kelsey. Located approximately four miles north of Placerville on State Route 193. Kelsey, originally called Slatington, was established as a business center serving the mining district during the gold rush period. Following his discovery of gold in Coloma, James W. Marshall lived in Kelsey doing blacksmith and carpentry. His blacksmith shop still stands; however, it is not known whether the remains are that of the ordinal blacksmith shop or that built at a later date. (*Mountain Democrat*)

Kyburz. Located 40 miles east of Placerville on U.S. Highway 50. Kyburz was originally Slippery Ford, so named when the Ford Post Office was moved from Strawberry to what is now Kyburz in 1869. Established by William Ormsby in 1861, the property exchanged hands several times before being purchased by Albert B. Kyburz in 1903. The area became known as "Kyburz" in 1911. Kyburz features the Kyburz Lodge which includes a post office, store, saloon, and restaurant, the Kyburz Garage, and the Kyburz Motel. In addition to serving the residents in the area, Kyburz also serves vacationers. Kyburz is located between three to five miles from three major campgrounds: Silver Fork, China Flat, and Sand Flat. (*Mountain Democrat*)

Latrobe. Located approximately eight miles south of El Dorado Hills on Latrobe Road at the intersection of South Shingle Road. Latrobe owes its origin to the Placerville and Sacramento Valley Railroad which established a station for the benefit of neighboring Amador County. The station was located at the intersection of Latrobe Road and South Shingle Road in what became the town of Latrobe. The railroad was completed in 1864. The townsite was surveyed and plotted by Chief Engineer F.A. Bishop, who also suggested the name of the town after Latrobe, the civil engineer who was instrumental in the construction of the first railroad in the United States.

The townsite covered approximately 240 acres and was owned by Mr. J.H. Miller, being enclosed in what was known as the Poss Claim. Upon completion of the required survey work, the town lots were then advertised for sale by Mr. Bishop with the consent of Mr. Miller. Between 75 and 100 lots were sold at auction.

The first store had been opened by Mr. Miller in 1863 before the town was laid out. After the town was built, he sold out to Mr. William Kirkland. The population rapidly grew to 700 or 800 with the number of stores increasing to six or seven. Latrobe soon was supporting four hotels, the first of which was opened by Mr. Miller, as well as three blacksmith shops, and a wagon and carriage factory.

There were three doctors, Dr. Treuholtz, Dr. Barber and Dr. Taylor, together with two drug stores to look after the medical needs of the community. The town also contained a bakery and several butcher shops. For quite a while, the town of Latrobe controlled all trade activities of Amador County. The town became a focal point for many travelling people, providing eight daily stages in connection with the railroad. The railroad construction continued east and brought about a decline in business activities to the town of Latrobe. The population of 800 dwindled to about 80, with one general store, one hotel, telegraph and express office, two blacksmith shops, and the one carriage and wagon shop. Today, the businesses are gone, and the townsite consists primarily of residential dwellings, along with the Latrobe Elementary School and the Oddfellows Hall.

Lotus. Lotus is located one mile from State Route 49, northwest of Coloma along Lotus Road. Historic sites in Lotus include the Sierra Nevada House III, the third inn to be built on this spot after its Gold Rush predecessors burned to the ground; the Red Uniontown Schoolhouse; the Old Uniontown Cemetery, where headstones date back to the early 1850s; and Adam O. Lohrey's Brick General Store, believed to include timbers cut at the original Sutter's Mill.

Meyers. Located in the Tahoe Basin along the intersection of U.S. Highway 50 and State Route 89, approximately three and a half miles south of South Lake Tahoe. The community of Meyers was first established in the 1850s as a way station near its present location in the lower Lake Valley along the Upper Truckee River. In 1859, Martin Smith, Meyer's original developer, sold the station to Yank Clement who renamed it Yank's Station. The station provided food, lodging, water, and pasture to the thousands of travelers and their animals travelling over Echo Summit along the Great Bonanza Road. Yank's Station included a hotel, two saloons, a general store, a blacksmith shop, a cooperage, private homes, and stables and barns. From 1860 to 1861, it served as a remount station for the Pony Express and is listed as a California Historical Landmark. In 1873, Clement sold the establishment to George Meyers who owned it for thirty years before selling to the Celio family.

During the 1960s, the area around Meyers was part of a grand residential subdivision plan originally developed by two corporations, Tahoe Paradise Homes and Tahoe Paradise Properties, Inc. The new neighborhoods were to be called Tahoe Paradise. Since that time, considerable confusion has existed over the actual name of the area - Meyers or Tahoe Paradise.

Today, Meyers still functions as way station for visitors and the gateway to the Lake Tahoe area. The commercial area along U.S. Highways 50 and State Route 89 still retains the name of Meyers while the surrounding residential neighborhoods are generally known as Tahoe Paradise. In addition to a way station, Meyers also serves surrounding residents with convenience retail goods and services. Unlike other communities in the Tahoe Basin along the Lake's shore, Meyers is separated from intense commercialization. It retains its own character while providing a variety of land uses.

Mosquito. Located approximately four and a half miles north of Placerville on Mosquito Road.

Mt. Aukum (also known as Mt. Orcum, Ankum, Orkum and Aukum). Located approximately ten miles south of Pleasant Valley on Mount Aukum Road. Mt Aukum served as a small trading village. There was one gold mine in operation and a stage stop and a boarding house at the Jackson Ranch. In 1860, the Mt. Orcum School was opened. A post office opened in 1890 and it was named Aukum. The legal name was changed in 1960 from Aukum to Mt. Aukum as mail was being missent to Auburn.

Nashville. Located eight miles south of El Dorado on State Route 49. Nashville began in 1851 as Quartzburg, a store and boarding house serving the Nashville-Tennessee, Montezuma, and other surrounding mines. Quartzburg was renamed Nashville by miners from Tennessee in 1952 with the opening of the U.S. Post Office. Once an important trading station, the only commercial activity in Nashville today is Club Nashville, a saloon and restaurant. (*Mountain Democrat*)

Oak Hill. Located on Pleasant Valley Road, approximately two miles east of the Diamond springs townsite.

Pilot Hill. Located on State Route 49, three miles south of Cool. Pilot Hill is known for the historic Bayley House, a graceful, three-story, red brick mansion, built by Alcander Bayley in 1862. Pilot Hill is named for the hill that explorer John Fremont used as a landmark to guide his expeditions in 1844 from the Sierra to Sutter's Fort.

Placerville. The only incorporated city on the Western Slope of El Dorado County, Placerville or "Old Dry Diggin's," was also nicknamed "Hangtown" after citizens discouraged a gang of criminals by using the hanging tree in Elstner's hay yard. Incorporated as Placerville in 1854, the growing town defeated Coloma in an 1857 contest for the County seat. The restored 1912 County Courthouse still stands. City government presides in the picturesque City Hall next door which includes the Old Roller Building, erected in 1859.

Pollock Pines. Generally located north of U.S. Highway 50, along Pony Express Trail, and approximately at the 4,000 foot elevation. Pollock Pines is the home of the annual Pony Express Re-Run Celebration, held every Fourth of July. A plaque at Sportsman's Hall marks the site of the 12-Mile House, a pony express and freight wagon stop.

Quintette. Located 12 miles east of Georgetown on Wentworth Springs Road. Quintette is named after John J. Quinn who received the original land grant in 1889 for 163 acres of forest land. The Pony Express stopped here between 1860 and 1861 on the way from Georgetown to Tahoe. The original building located in Quintette thus became known as the twelve-mile house. The twelve-mile house later became the Quintette Inn which burned down in 1945 and was replaced by a cabin which also burned down in 1955. Another cabin was built which still stands today and is known as the twelve-mile house. The community of Quintette, which originally served the Blue Bird Mine and logging camp, now serves as a recreational center serving visitors to Stumpy Meadows Reservoir located five miles to the east on Wentworth Springs Road. (*Mountain Democrat*) (Also see American River Canyon and Communities)

Rescue. Located approximately three miles north of Shingle Springs on Shingle Springs Road. The Rescue community was first known as Green Valley and was an early way station of the wagon road from Sacramento to the "diggins" in 1848. With the inception of California's first stage line from Sacramento to Coloma and Placerville in 1849, one of its stops was Green Valley. The community's name was changed to Rescue in 1895 in commemoration of Andrew J. Hare's successful Rescue Mine. A small community center has persisted to the present to serve the surrounding agricultural development with a post office, store, community hall, and church.

Smith Flat. Located north of U.S. Highway 50, just east of Placerville. Smith Flat was an early mining and lumber company. Abe Saul's popular stage stop, the Smith Flat House, was built in the 1860s. It is the best preserved way station along U.S. Highway 50 and housed a post office for more than 130 years. The Smith Flat House is currently a restaurant and saloon.

Increased property values, retail sales, commercial rents, and tax revenues are among other economic benefits derived from the preservation of historic resources. Preservation, renovation, or rehabilitation of historic resources also contribute to community pride and help improve the appearance of sites, neighborhoods, districts, and cities. The objectives and policies of the General Plan establish guidelines for preserving elements of the County's history, encouraging economic development opportunities, and maintaining the historic resources which contribute to the County's rural character.

Somerset. Located approximately two and a half miles south of Pleasant Valley on Mount Aukum Road. A hotel was built here in the late 1860s by people from Somerset, Ohio. Somerset House came into prominence in history when stage robbers had a shootout with the sheriff at the hotel in 1864. A store was built in the 1870s to serve miners from Grizzly Flat and traders from other towns. The River School was built in 1878. A post office was not commissioned until 1924 when it was named Youngs after farmers Walter, Margaret, and Morgan Young. In 1950, the name was changed to Somerset.

South Lake Tahoe. Located along U.S. Highway 50 bordering the South Shore of Lake Tahoe. South Lake Tahoe is the only incorporated city on the Eastern Slope of El Dorado County.

Tahoma. Located along State Route 89, approximately 14 miles north of South Lake Tahoe.

Environmental Setting

Natural Landscape Features. A unique variety of natural environments and microclimates exist within El Dorado County from the Tahoe Basin to the alpine regions of the Sierra, to the various lower elevations of the foothills. The preservation and identification of these environments, or natural resources, are covered in-depth in the Conservation and Open Space Chapter including biological, ecological, historical, and cultural aspects. This chapter concentrates on the preservation of these same resources in terms of high quality visual amenities.

Visual resources are visible elements which combine to form a vital landscape that requires protection and preservation from the degrading effects incompatible development can cause. Unique geologic features (mountains, valleys, ridgelines, and major rock outcroppings) provide residents and visitors with the benefits of scenic beauty, contributing the County's tourism industry and rural character. Scenic rivers and streams such as the American and Cosumnes Rivers not only provide habitats for many wildlife species but also contribute to recreational and commercial tourist activities. In addition, a wide range of natural vegetative communities contribute to the overall visual integrity of the County. For visual purposes, the following seven major types of vegetative communities exist in El Dorado County:

- Chaparral and Brush Land. These communities exist throughout El Dorado County and include dominant flora such as manzanita, ceanothus, toyon, scrub oak, sage, and mountain mahogany.
- Hardwood Forests. This community exists in western El Dorado County in the foothills and riparian zones within the low to middle elevations of the mountains. This habitat is used for grazing, watershed protection, recreation and wildlife habitat. Vegetation is mostly oaks and includes California bay, madrone, tan oak, cottonwood, alder, maple, dogwood, sycamore, ponderosa and digger pine.
- Coniferous Forests. This vegetation community covers a large portion of El Dorado County, mostly from the central to the eastern areas. Coniferous forests provide saw timber and forest products, recreation, watershed protection, and wildlife habitat. Species may include sugar, western white, lodgepole, ponderosa, and Jeffrey pines; red and white firs; Douglas fir; mountain hemlock; oak; dogwood; tan oak; and incense cedar.
- Grass Lands. Occurring mostly in foothills, meadows, and on plateaus, grasses and forbs provide grazing and wildlife habitat. The dominant flora includes wild oats, bromes, fescue, clover, filaree, needlegrass, California oatgrass, and bluegrass.
- High Alpine Areas. These are isolated areas in the Sierra Nevada of eastern El Dorado County. High Alpine areas have sparse vegetation and are often rock outcrops.
- Agriculture. This group includes horticulture, crops, orchards, tree farms, and range land.

- Riparian Woodlands. This plant community occurs along rivers and stream beds. In broad river valleys, the area can extend several hundred feet on either side of a river or stream bank. At higher elevations, riparian woodlands often form a very narrow strip of land that may be only twenty feet in width.

Planning Documents

Several planning documents have guided the location and intensity of existing land use in El Dorado County. These documents are listed in Appendix B. The 24 adopted Area Plans¹ have provided land use policy and direction for more than 487,000 acres of private land in the County since they were prepared during the 1970s and 1980s. This represents approximately 45 percent of the 1,093,000 total acres in El Dorado County. The majority of the remaining 55 percent of the land within the County consists of the cities of Placerville and South Lake Tahoe and public lands within the jurisdiction of the U.S. Forest Service, the Bureau of Reclamation, the Bureau of Land Management, and the State of California. A small percentage of private lands not covered under one of the adopted Area Plans are covered by the 1969 General Plan. These lands include private land holdings within: (1) the areas identified as Fignon and Volcanoville; (2) the National Forest; and, (3) the Lake Tahoe Basin.

Each of the Area Plans includes a map and a table summarizing land use designations applicable to that area. Each plan includes some or all of the following land use designations:

- Industrial;
- Commercial;
- Multifamily residential at densities up to 20 dwelling units per acre;
- High density single-family residential at densities up to 5 dwelling units per acre;
- Medium density single-family residential at densities between 1.0 and 4.9 acres per dwelling unit;
- Low density single-family residential at densities between 5.0 and 9.9 acres per dwelling unit;
- Rural residential at densities between 10 and 160 acres per dwelling unit;
- Open space and conservation;
- Parks and recreation;
- Agriculture;
- Public facilities; and
- Timber production.

¹ Twenty-six separate areas were initially identified for the development of Area Plans; however, only 24 plans were actually adopted.

The primary objective in preparing each of the Area Plans was to correlate land use and development policies with the goals and desires of local residents. In response to increased development pressure, recent trends in land development practices, and changes in the local economy, a significant number of general plan amendments have taken place since the time the Area Plans were developed. Table 2-1 shows the acreage breakdown by land use type as adopted by the Area Plans and the current breakdown reflecting the results of the numerous amendments that have taken place.

These changes in land use designations have had a 1.1 percent increase in the projected buildout population of El Dorado County. Table 2-1 also shows the comparison of the projected "saturation population" of the Western Slope of the unincorporated portion of the County according to the Area Plans as they were originally adopted versus the current potential buildout population....

TABLE 2-1
ADOPTED VS. CURRENT LAND USE DESIGNATIONS AND POTENTIAL POPULATION

Land Use Type	Persons Per Acre ¹	Originally Adopted in Area Plans				Current Area Plans ⁷			
		Acres	%	Potential Population	%	Acres	%	Potential Population	%
MFR ²	31.90	1,855	.4	59,175	19.4	1,888	.4	60,227	19.6
HDR ³	8.00	19,052	3.9	152,416	49.9	19,212	3.9	153,696	49.8
MDR ⁴	1.33	25,149	5.2	33,448	11.0	25,755	5.3	34,254	11.1
LDR ⁵	.53	72,950	15.0	38,664	12.7	73,665	15.1	39,042	12.7
RRA ⁶	.07	236,000	48.4	16,520	5.2	234,842	48.2	16,439	5.1
C	0.00	2,674	.5	0	0.0	2,886	.6	0	0.0
I	0.00	3,734	.8	0	0.0	3,924	.8	0	0.0
A ⁶	.07	7,826	1.6	548	.2	7,033	1.4	492	.2
OS ⁶	.07	71,143	14.6	4,980	1.6	71,247	14.6	4,987	1.5
TPZ	0.00	46,198	9.5	0	0.0	46,198	9.5	0	0.0
PF	0.00	682	.1	0	0.0	614	.1	0	0.0
TOTALS		487,263		305,751		487,264		309,137	

¹ Assumes a population density of 2.66 persons per household, no distinction between multi-family and single family, as it represents a County-wide average from the 1990 Census.

² Average density factored at 12 dwelling units per acre: $12 * 2.66 = 31.92$.

³ Average density factored at 3 dwelling units per acre: $3 * 2.66 = 7.98$.

⁴ Average density factored at 2 acres per dwelling unit: $1/2$ (dwelling units per acre) * 2.66 = 1.33.

⁵ Average density factored at 5 acres per dwelling unit: $1/5$ (dwelling units per acre) * 2.66 = .532.

⁶ Average density factored at 40 acres per dwelling unit: $1/40$ (dwelling units per acre) * 2.66 = .0665.

⁷ Refers to Area Plans as of September, 1993.

Note: Finnon and Volcanoville Area Plans were not approved and are not included in table calculations.

County Zoning

The County Zoning Ordinance and zoning maps provide the implementing planning tools that regulate land use development on a daily basis. Although the General Plan provides the overall guidance by policy for land use decisions within the County, it is the Zoning Ordinance and the zoning maps that effectively control such issues as allowable land use, parcel size, height, density, setbacks, etc. by ordinance. The County Zoning Ordinance is required to implement, and to be consistent with, the General Plan. The General Plan update process will result in a comprehensive revision of the County Zoning Ordinance. The revision of the zoning ordinance is scheduled for completion within one year following adoption of the General Plan update.

The County Zoning Ordinance includes 36 separate zoning districts, including 17 residential districts, four commercial districts, two industrial districts, nine natural resource management districts and five special overlay or combining districts. Additional districts will be added to fully implement new land use designations and policies contained in the General Plan update. A matrix showing the correlation of existing and new zoning districts to the land use designations is contained in Table 2-2.

POPULATION AND EMPLOYMENT GROWTH PROJECTIONS

Population

A population and employment forecast was prepared as part of the General Plan Program. This forecast integrates 1990 Census data and other more recent employment data from the California Employment Development Department (EDD). This forecast also takes into account the out-commute potential of County residents that would commute to jobs outside the County to employment centers in Sacramento County, Placer County, and Nevada (i.e., Stateline). Currently, at least 24,300 County residents commute to jobs outside the County.

Basis of the Population Forecast

The population in El Dorado County is expected to increase from a 1990 base of about 124,730 to 250,014 by 2015 for a net increase in total County population of 125,284. This amount of population growth is based on the Department of Finance (DOF) projected average annual growth rate for El Dorado County to the year 2015 which is 2.6 percent. This projection is shown in Table 2-3. Not all of this growth will occur in the unincorporated areas of the County. In order to determine how much growth could potentially occur in the incorporated areas of Placerville and South Lake Tahoe, an inventory of each jurisdiction's supply of residential land was reviewed.

TABLE 2-2
GENERAL PLAN LAND USE DESIGNATION AND ZONING DISTRICT CONSISTENCY MATRIX

ZONING DISTRICTS	LAND USE DESIGNATIONS									
	MFR	HDR	MDR	LDR	RR	NR	C	R&D	I	OS
RM, RT, & R2	●									
R1 & R20,000		●								
R1A, 2A, & 3A			●							
MP	●	●	●							
RE-5			○	●						
RE-10			○	●	●					
RA-20			○	●	●					
RA-40			○	○	●	●				
RA-60, 80, 160, & 320			○	○	○	●				
C							●			
CH*							●			
NS*	●	●	●							
CG, CP, & CPO							●			
R&D							●	●	●	
I									●	
IR*					●	●			●	
A & SA-10				●	●					
PA-20+				●	●	●				
AE				●	●	●				●
TPZ					●	●				
MR					●	●	●		●	
RF	●	●	●	●	●	●	●			●
CN		○	○	●	●					●
OS	●	●	●	●	●	●	●	●	●	●
AA	●	●	●	●	●	●	●	●	●	
TC	●	●	●	●	●	●	●	●	●	●

* New Districts: CH: Highway Commercial NS: Neighborhood Service IR: Resource Industrial
 ** Compatible, as used here, means that the particular zone district may serve as a "holding zone".

LEGEND:



Consistent



Compatible**

Inconsistent

TABLE 2-3
POPULATION FORECAST - 1990 to 2015

Item	Projected Average Annual Growth Rates (%)		1990 Census Household Population ²	1995	2000	2005	2010	2015	Baseline Incremental Growth 1990-2015
	1990-2000	2000-2015							
Placerville	0.6	0.6	7,789	8,008	8,233	8,464	8,702	8,946	1,157
So. Lake Tahoe	1.3	1.3	21,426	22,883	24,438	26,100	27,874	29,769	8,343
Unincorporated Areas	3.6	3.0	95,515	113,991	136,041	157,418	182,154	211,299	115,784
El Dorado County	3.1	2.6	124,730	144,881	168,712	191,982	218,730	250,014	125,284

¹Based in part on DOF 1990 to 2005 Projections, P-3 Report, May 1993) and projections from the Center for Continuing Study of the California Economy, "California County Projections, 1992 Edition."

²1990 Base is from DOF, revised E-5 Report for April 1, 1990, which reflects the U.S. 1990 Census.

Note: The 1990 Census household population total excludes 1265 persons in institutions.

Source: California Department of Finance; Center for Continuing Study of the California Economy; and Economic and Planning Systems, Inc. (Table III-1, August, 1993).

Within the City limits of Placerville, there is vacant residential land to accommodate about 400 new dwelling units. This amount of growth is expected to occur over the 20-year time frame of the County General Plan. A net increase of 400 dwelling units could accommodate about 913 new residents (at an estimated 2.8 persons per household). The implied average annual growth of this amount of new population would be approximately 0.56 percent.

Within the City limits of South Lake Tahoe, there is enough vacant residential land to accommodate about 3,115 new dwelling units; approximately 2,828 new units are forecast to be built in the next 20 years. This amount of development could accommodate roughly 6,448 new residents which implies an average annual growth rate of 1.3 percent.

The City of South Lake Tahoe and the unincorporated area of the Basin is subject to Tahoe Regional Planning Agency (TRPA) regulations which restrict the number of new housing starts to the number of allocations issued. The TRPA allocations are determined during the regular five year updates of the TRPA plan. For the five year period of 1992 through 1996, there are 38 allocations for South Lake Tahoe and 72 for the unincorporated portion of the south and west shores in El Dorado County. In 1995 and 1996, the next five year allocation will be determined. Although the number of housing starts would appear to restrict the population growth in the Basin, the Tahoe Basin currently has a higher vacancy rate than other portions of the County leaving room for growth in population without the reliance on new construction. In addition, the average persons per household in the Tahoe area is lower than the County average.

A higher persons per household average could also accommodate projected growth. Excess population can be expected to spread throughout the rest of El Dorado County, but general projections can be considered valid due to the relatively small population growth projected for the Lake Tahoe Basin (7 percent of the County total).

The combined growth in population expected to occur in Placerville and South Lake Tahoe would be about 7,361. This would result in a net new population for the unincorporated areas of the County of about 86,639. The implied average annual growth rate in the unincorporated areas would be 3.28 percent during the 20 year period.

Table 2-4 provides a comparison of the estimate of housing units in the County in 1990 and the forecast of population converted into dwelling units using average persons per household factors from the 1990 Census. About 34,000 net new dwelling units are forecasted to occur in the unincorporated areas of the County. This amount of growth would imply an average of about 1,539 new dwelling units per year in the unincorporated areas; County-wide, new housing starts would average about 1,700 per year.

TABLE 2-4
PROJECTED GROWTH IN HOUSEHOLDS

	Census 1990 Housing Units	1990 Census Average Persons Per Household	Implied Persons Per Household	Incremental Population Growth Under Baseline Table 2-3, to 2010	Estimated New Housing Units 1990-2010	Estimated Total Households at 2010	Implied Housing Starts Per Year
Placerville	3,565	2.35	2.28	913	400	4,072	20
So. Lake Tahoe ¹	14,066	2.35	2.28	6,448	2,828	16,861	141
Unincorporated	43,820	2.92	2.82	86,639	30,772	73,822	1,539
El Dorado County	61,451	2.66	2.76	94,000	34,000	94,755	1,700

¹The figure for South Lake Tahoe includes about 5,000 seasonal units; therefore, the figure does not represent actual households in the City.

Source: Department Of Finance, 1991; Economic and Planning Systems, Inc. Table III-2, August 1993; Table II-2, November 1993; El Dorado County Planning Department.

Employment Forecast

The California Employment Development Department (EDD) reports forecast County employment growth for a period of five years. The most recent report forecasts County employment to 1996. EDD's forecasts reflect short-term trends and can over-estimate shifts in employment when extrapolated into the future. EDD does not include estimates of self-employment which in El Dorado County makes up a substantial portion of total employment. For this analysis, self-employment is estimated to be about 15 percent of total wage and salary employment in 1990 and forecast to be about ten percent of total wage and salary incremental employment to 2010.

EDD's current projected growth rates for 1989 to 1996 were used as the base for a long-range employment forecast. These average annual growth rates were extrapolated to 2010. Adjustments were made to the growth rates depending on the implied structural shift in employment by industry that would occur during 1990 to 2010. For example, EDD forecasts retail employment to grow at about five percent per year on average. This may be a realistic growth rate to 1996 but for this analysis was adjusted downward to 3.8 percent over the 20 year period.

Table 2-5 provides a summary of employment forecasts by industry and growth rates used. It also calculates the 1990 distribution of employment by industry and compares it to employment at 2010. The percent amount of shifts expected to occur are shown in the far right column. Services as a percent of total employment is forecast to increase from 22.3 percent in 1990 to 27.6 percent in 2010. Total employment is forecast to increase by about 35,500 jobs, or from a base in 1990 of about 34,200 to a total of 69,700 jobs in 2010.

TABLE 2-5
EMPLOYMENT PROJECTIONS FOR JOBS WITHIN EL DORADO COUNTY: 1990-2010

Industry	Average Annual Growth Rates	1990	1995	2000	2005	2010	Increase 1990 to 2010	1990 Distribution	Future Distribution	Amount of Shift
BASELINE FORECAST¹										
Agriculture	0.0%	300	300	300	300	300	0	0.9%	0.4%	-0.4%
Mining	4.1%	300	366	446	544	663	363	0.9%	1.0%	0.1%
Construction	4.1%	2,700	3,294	4,019	4,904	5984	3,284	7.9%	8.6%	0.7%
Manufacturing	4.9%	2,000	2,543	3,233	4,111	5227	3,227	5.9%	7.5%	1.6%
T.C.P.U. ²	1.4%	800	856	916	980	1049	249	2.3%	1.5%	-0.8%
Wholesale Trade	3.7%	600	717	857	1,025	1226	626	1.8%	1.8%	0.0%
Retail	3.8%	7,600	9,157	1,1034	13,295	16020	8,420	22.3%	23.0%	0.7%
F.I.R.E. ³	3.4%	1,500	1,775	2,101	2,487	2944	1,444	4.4%	4.2%	-0.2%
Services	4.7%	7,600	9,583	1,2084	15,237	19213	11,613	22.3%	27.6%	5.3%
Government	2.7%	6,300	7,197	8,222	9,393	10731	4,431	18.4%	15.4%	-3.0%
Self-Employment ⁴	1.8%	4,455	3,579	4,321	5,228	6336	1,881	13.0%	9.1%	-4.0%
TOTAL	3.6%	34,155	39,367	47,533	57,504	69,693	35,538	100.0%	100.0%	0.0%

¹Based on EDD projected growth rates for the 1989 to 1996 period.

²Transportation, Communication, Public Utilities

³Finance, Insurance, Real Estate

⁴Self-employed is assumed to be 15 percent of total wage and salary employment in 1990 and forecast to be 10 percent in future years.

Source: EDD; Economic and Planning Systems

The employment forecasts take into consideration the potential for new residents to commute out of the County for employment. The bulk of this commute will take place on U.S. Highway 50 either to Sacramento County or Nevada; some workers will also commute via State Route 49 to Placer County. Current total out-commute trips, i.e., work trips, in 1990 are estimated to be about 24,350. About 6,000 of these are estimated to be residents commuting to the Nevada side of South Lake Tahoe. EDD estimates that in 1990 there was a potential total of 66,500 employed residents in the County and a total of about 34,200 jobs. Thus, about half of the current employed residents could potentially work in the County and the remainder must commute outside the County for employment. There is currently an estimated 12 percent more (8,000) potential workers than jobs. This net surplus of labor probably is accounted for by retired households and households on public assistance or unemployed.

Table 2-6 provides the employment forecast for the County in terms of an estimate of the amount of population-serving jobs (employment that serves the local population) versus basic jobs (employment that produces goods for export) that are expected to occur. Based on assumptions made for each sector of employment, the County currently has about 5,700 more population-serving jobs than basic jobs. By 2010, the gap is expected to widen as the economy becomes more "service-oriented" and the ratio of population to employment changes. The rate of growth for population-serving jobs is forecast to be about 3.7 percent on average per year; the growth in basic jobs is forecast to be slightly less at 3.6 percent. The population-serving jobs per capita ratio is expected to increase from 0.16 jobs per capita to 0.19 jobs per capita. The basic jobs per capita ratio would increase from 0.11 in 1990 to 0.13 in 2010. This increase is in line with projected increases at the State level.

Given the future potential for additional commuters and the projected employment growth between 1990 and 2010, it appears that the projected population is in balance with the expected employment growth. That is, there should be enough jobs and out-commute potential to accommodate the number of employed residents needed to support household growth.

Jobs/Housing Balance

A jobs/housing balance is a measure of an area's total jobs compared to total housing. The general measure of a jobs/housing balance is the "jobs to employed residents ratio." If the ratio is 1.0 the area is in balance or there is potentially one job for every employed resident. When the ratio is out of balance in either direction, it implies that people are forced to commute for work to other areas, aggravating traffic congestion and air pollution.

El Dorado County is an exporter of labor; more people commute to employment outside the County than commute into the County. In 1992, the ratio of jobs in the County to employed residents ratio was 0.52. Over half of the County's employed residents commute to employment outside the County. This ratio is expected to increase to 0.59 by 2010. The current jobs per employed residents ratio in the unincorporated area is expected to increase from a 0.38 in 1990 to 0.53 by 2010. This increase means that the relationship between jobs and population will improve and shift over time to become closer to a desired balance of 1.0 jobs per employed resident. The County will continue to be a net exporter of labor to surrounding counties.

In 1992, the unincorporated areas had fewer jobs relative to employed residents and population than the two incorporated areas. This condition is typical of most counties in the area. Employment centers tend to gravitate toward urban centers. This condition should change in the future as the General Plan land use map allows for more employment opportunities to locate in the unincorporated areas of the County.

**TABLE 2-6
SUMMARY OF EMPLOYMENT GROWTH BY INDUSTRY SECTOR**

Category	1990	% of Sector that is Population-Serving vs Basic ¹	Baseline		Average Annual Growth Rate
			Increase 1990-2010	Total 2010	
Household Population	124,730		94,000	218,730	2.8
Households	60,755		34,000	94,755	2.2%
Population-Serving					
Retail	5,320	70	5,894	11,214	
Services	6,460	85	9,871	16,331	
T.C.P.U. ¹	80	10	25	105	
F.I.R.E. ²	1,125	75	1,083	2,208	
Local Government	4,725	75	3,323	8,048	
Self-Employed	2,228	50	940	3,168	
Total Population Serving	19,938		21,136	41,074	3.7%
Basic					
Agriculture	300	100	0	300	
Mining	300	100	363	663	
Construction	2,700	100	3,284	5,984	
Manufacturing	2,000	100	3,227	5,227	
T.C.P.U. ¹	720	90	224	944	
Wholesale	600	100	626	1,226	
F.I.R.E. ²	375	25	361	736	
Retail	2,280	30	2,526	4,806	
Services	1,140	15	1,742	2,882	
State/Fed. Gov.	1,575	25	1,108	2,683	
Self-Employed	2,228	50	940	3,168	
Total Basic	14,218		14,401	28,619	3.6%
TOTAL EMPLOYMENT	34,156		35,537	69,693	3.6%
Jobs Per Capita	0.27		0.38	0.32	
Population-Serving	0.16		0.22	0.19	
Basic	0.11		0.15	0.13	
Jobs Per Household	0.56		1.05	0.74	
Population-Serving	0.33		0.62	0.43	
Basic	0.23		0.42	0.30	

¹Transportation, Communication, Public Utilities

²Finance, Insurance, Real Estate

Source: DOF; EDD; Economic and Planning Systems, Inc. Table III-5, August, 1993.

TABLE 2-7
SUMMARY OF COUNTY JOBS/HOUSING BALANCE

Market Area	1990 Ratio of Jobs to Employed Residents	Incremental Population Growth	Incremental Household Growth	Estimated Employed Residents ¹	Projected Employment 1990-2010 ²	Potential Out-Commuters	Incremental Jobs Per Employed Resident	2010 Jobs per Employed Resident
Placerville	1.06	913	400	511	344	167	0.67	1.54
South Lake Tahoe	1.06	6,448	2,828	3,619	2,436	1,183	0.67	0.65
Unincorporated Area of the County	0.41	86,639	30,772	39,388	32,748	6,640	0.83	0.57
Total County	0.59	94,000	34,000	43,520	35,537	7,989	0.82	0.64

¹ Assumes an employed residents per household factor of 1.28.

² Assumes a total jobs per capita ratio of 0.38.

Source: Economic and Planning Systems, Inc. Table IV-3, August 1993.

MAJOR PLANNING FEATURES

Six major planning features provide the basis for the land use designations and land use pattern that is promoted and supported by the Land Use Element, Volume 1, and the General Plan Land Use map. These major planning features are discussed in this section of the chapter and are listed below:

- In-fill development;
- Conservation of natural resources;
- Development constraints;
- Development opportunities;
- Community development; and
- Growth monitoring.

In-fill Development

In-fill development is defined as the development of vacant parcels that are located within developed areas of the County. These developed areas of the County include the communities of El Dorado Hills, Cameron Park, Shingle Springs, El Dorado, Diamond Springs, Camino, Pollock Pines, Georgetown, the area immediately surrounding the City of Placerville, and Meyers in the Tahoe Basin. These existing communities have a fairly well-defined outer perimeter or edge which defines the extent of existing high-density development. Within this outer perimeter are numerous parcels of varying sizes that are currently vacant or underutilized.

By developing these vacant and underutilized parcels with new housing, the County has the opportunity to increase its housing supply without expanding urbanized development into currently undeveloped or rural areas. In addition, the County can reduce the cost of housing by avoiding building new infrastructure to serve "leap-frog" development. In most of these in-fill areas, water and sewer lines are already in place and are sized in anticipation of future development. Existing roadways directly access many of these in-fill sites. Public services, such as structural fire protection districts, serve most of these areas although staffing and equipment may have to be increased to accommodate in-fill development populations.

Vacant and underutilized properties have the potential to absorb as many as 10,000 new residential units under current zoning provisions (Table 2-8 below). The majority of this in-fill potential is located within the communities of El Dorado Hills, Cameron Park, and Diamond Springs.

TABLE 2-8 ESTIMATED IN-FILL DEVELOPMENT POTENTIAL IN DWELLING UNITS	
Community	In-fill Development Potential Under Existing Zoning Provisions¹
El Dorado Hills	4,900
Cameron Park	1,800
Shingle Springs	200
Placerville Region	600
El Dorado	500
Diamond Springs	1,200
Camino	200
Pollock Pines	800
Georgetown	100
TOTAL	10,300
¹ In-fill development potential does not include those already approved but not yet built projects.	
Source: Sedway Cooke Associates, 1992	

Vacant parcels in more urbanized areas are generally designated for higher-density residential uses and are zoned accordingly. Some parcels may not be able to reach their full development potential due to topographic constraints access constraints and adjacent existing uses that may be incompatible with residential use. Even if 50 percent to 75 percent of these vacant parcels were to be developed over the 20 year time frame of the General Plan, the County could add as much as 5,100 to 7,600 new residential units without increasing the outer perimeter of urbanized development within the County.

Preservation and Conservation of Natural Resources

A key goal of this County General Plan program is to identify, protect, and conserve important natural resources within the County. These important natural resources include:

- Agricultural soils as designated by the U.S. Soil Conservation Service, the California Department of Conservation, and the local County Agricultural Commission;
- Critical deer migration corridors and fawning areas as identified by the California Department of Fish and Game;
- Rare and endangered species habitat as listed by the California Natural Diversity Data Base;
- Wetlands, riparian corridors, and floodplains as designated by the U.S. Army Corps of Engineers and the Federal Emergency Management Agency;
- Forested areas that provide for long-term timber operations, wildlife habitat, recreation, water supply, and that are also identified by the California Department of Forestry and Fire Protection as extreme and high fire hazard zones;
- Mineral Resources; and
- Visual Resources.

Other chapters of Volume II identify and address in detail most natural resources: the Agriculture and Forestry Chapter discusses agricultural soils and forests; the Conservation and Open Space Chapter addresses mineral resources, wildlife habitat and rare and endangered plant species; and the Public Health and Safety Chapter addresses floodplains and high fire hazard areas. Each of these resource types have been mapped at one inch equals 2,000 feet (1 inch = 2,000 feet) scale. These maps are available for review at the County Planning Department.

Visual Resources: This section addresses the protection and improvement of scenic values along highways, roadways, and rivers while accommodating a reasonable level of growth along these scenic corridors. While the protection of scenic corridors has intrinsic environmental value, they also play an important role in the County's economic development strategy by providing a foundation for the recreation and tourist sectors of the County's economy and for attracting large employers. The County will protect and enhance its natural scenic beauty by identifying those portions of the State highway system and County roads, along with scenic river corridors, that require special scenic conservation treatment.

A scenic corridor protection program is a process whereby a local government identifies a scenic corridor and adopts ordinances to protect its scenic qualities. In accordance with Government Code Section 65860, any zoning ordinance adopted must be consistent with the adopted General Plan. The County, through the objectives, policies, implementation measures, and standards set forth in the General Plan, may prepare a scenic highway ordinance. The minimum requirements for a scenic corridor protection program include:

- Regulation of land use and density of development;
- Detailed site planning and review;
- Control of billboards (as permitted by the California Outdoor Advertising Act);
- Careful attention and control of earthmoving and landscaping; and
- Review of the design and appearance of structures and equipment.

The major method to protect the visual quality of the County's major rivers and canyons is to minimize intensive development and maintain building setbacks to promote the natural character without precluding reasonable use of private property.

Scenic Highways: There are two types of official State designated scenic highways: State scenic highways and County scenic highways. In addition, El Dorado County has developed its own scenic highway designations. State scenic highways protection involves developing a Scenic Corridor Protection Program and obtaining approval at the State level. County roads and highways which are protected as scenic by local ordinances may also be designated as "Official County Scenic Highways." This State scenic highway designation process is initiated through an application by the County Board of Supervisors to the District Director of Transportation.

The requirements for a State Scenic Corridor Protection Program are enumerated in Article 2.5, Section 261 of the Streets and Highways Code and the "Guidelines for Official Designation of Scenic Highways, Section III." The program defines scenic as "containing outstanding vistas, flora, geology, and other unique natural attributes and/or historic or cultural resources which afford pleasure and instruction to the highway traveler." A local legislative body, County or City, is also given the power to "regulate the enjoyment of scenic beauty" in Section 65850 of the Government Code. In the California Streets and Highways Code, Section 261, local jurisdictions are required to take such actions as may be necessary to protect the scenic appearance of an officially designated scenic corridor.

Officially Designated State Scenic Highway: The status of a State scenic highway changes from "eligible " to "officially designated" when a local jurisdiction's Scenic Corridor Protection Program is in place and its application for official designation is approved. If a route is on the list of eligible scenic highways, there are three steps that must be taken to become an officially designated State scenic highway.

The first step is that a city or county with jurisdiction over lands adjacent to the highway submits a resolution of intent to the Departmental Transportation Advisory Committee (DTAC) through the local Caltrans district office.

The second step requires the city or county to prepare and adopt a scenic corridor protection program.

The third step entails a DTAC review of the protection program, a videotape showing representative sections of the highway, and the district scenic highway coordinator's recommendations.

The DTAC's recommendation is forwarded to the Caltrans Director who has the authority to approve or deny official designation.

State guidelines require renewal of the official designation of scenic highways every five years. Official State designation can be revoked if the local government ceases to enforce the protection program. A city or county may request revocation if it no longer wishes to be a part of the State program.

Three highways through El Dorado County are Officially Designated State Scenic Highways: U.S. Highway 50 from the eastern limits of the Government Center interchange in Placerville to South Lake Tahoe (April 1985 and 1986); all of State Route 89 within El Dorado County (April 1986); and those portions of State Route 88 (April 1986) which passes through El Dorado County on its southern border.

All of State Route 49 in El Dorado County is on the "Eligible State Highway" list but is not yet officially designated as a "State Scenic Highway."

Official County Scenic Highways: Local County roads may also become part of the State Scenic Highway Program. To receive the official State designation, a county must adopt a scenic corridor protection program that follows the State standards. The designation process is initiated through an application by the County Board of Supervisors to the District Director of Transportation. If the department, with the advice of DTAC, decides that the county road meets the minimum standards prescribed in the guide for official State scenic highways, the State Department of Transportation may then authorize the route to be designated as an Official County Scenic Highway.

Local Scenic Highways: In addition to the State Scenic Highway Protection Program, cities and counties may adopt their own Local Scenic Highways Program. Local scenic routes are established for the same reasons as State scenic roads, to protect scenic values and views, to promote tourism, and to regulate adjoining development. In many communities, local scenic routes are combined with street landscape and streetscape improvement programs, bikeways, equestrian and pedestrian paths, or other recreational and cultural programs.

Proposed El Dorado County Scenic Highways Ordinance: A proposed El Dorado County Scenic Highways Ordinance (June 1992) has been formulated for the purpose of designating certain portions of the State and County roadway system as local County scenic routes. The goal of the scenic highways ordinance is to protect and improve scenic values along designated scenic corridors. The development of El Dorado County's scenic highways not only adds to the pleasure of residents but also plays an important economic development strategy in encouraging the growth of the recreation and tourist industries in El Dorado County.

The Scenic Highways Ordinance has been developed so that it can ultimately apply to any scenic road in El Dorado County. The Scenic Highway Ordinance allows the County to apply the scenic highway designation on roadways that it considers culturally significant, historically important, or on roads that are of local importance even if they are not under State designation.

The prevailing character of the County is rural, however, some areas are experiencing growth pressures along the major roads. The immediate concern is to address development along U.S. Highway 50 from Placerville to the western County line.

The intent of the District is to establish the County's responsibility for the protection and enhancement of El Dorado County's natural scenic beauty by identifying those portions of the State highway system and County roads, along with adjacent scenic corridors, that require special scenic conservation treatment. The intent of the ordinance is to assign responsibility for the development of such roadways and adjacent corridors, for the establishment and application of specific procedures and development standards, and to indicate the location and extent of areas requiring continuing and careful coordination, planning, design, construction, and regulation of land uses and development.

Approach: The approach undertaken in preparing the Scenic Highway Ordinance included a visual survey and analysis of the U.S. Highway 50 and State Route 49 corridors using on-site survey, photographs, and video tape documentation. A visual analysis was conducted to identify the full range of conditions along scenic roadways in the County. These conditions were then categorized into major scenic components. Development standards and regulations were then developed to address each of these scenic components. This analysis is also useful as background information in developing the goals and policies for the Land Use Element of the General Plan.

The Scenic Highway Ordinance attempts to recognize and respect the distinctiveness of special conditions occurring throughout the County and to reinforce the intentions of the Open Space and Conservation Elements to preserve these differences. The proposed ordinance avoids an individual response to each existing or proposed scenic route. All routes are treated similarly in terms of a fixed set of visual components which in different combinations may be common to a number of routes.

Visual Characteristics: Foreground and Background: The foreground and background views have been identified in a U.S. Highway 50 viewshed analysis conducted by Sierra Land Design, under contract to El Dorado County. The El Dorado County Board of Supervisors endorsed the foreground and background mapping at a workshop held in June 1991. The average foreground is from zero to one-quarter mile. Background views are typically over one-quarter mile.

Scenic Byways: The Federal Department of Transportation, in association with a number of public and private agencies and groups, is in the process of developing a National Scenic Byways Program. Scenic byways are typically smaller, non-interstate local roads that are considered important because of their scenic, cultural, or historic value. These scenic byways are also known as backways, highways, historic routes, leisure ways, loops, parkways, rustic roads, and scenic trails. All of these roadways perform the functions of a traveled roadway and fall within the definition of a scenic byway.

In a national survey in 1990, the Federal Highway Administration tallied over 51,000 miles of designated or potential scenic byways, with about 67 percent already designated under a Federal, State, or local program. Most (approximately 75 percent) are under State programs and are two-lane paved roads. A major benefit of a scenic byway program, as well as the scenic highway program, is the moneys that flows to the travel and tourist industry.

Development Constraints

Constraints to development within the El Dorado County that are significant in terms of land use planning include:

- Inadequate and substandard County rural roads that are incapable of accommodating significant increases in traffic;
- Areas that are not served with public or community water and wastewater infrastructure, and that are too distant or inaccessible to existing facilities to make such services economically feasible;
- Steep topography (slopes greater than 40 percent);
- Inadequacy of public services such as fire protection, schools, and emergency services to serve an expanding population;
- An uncertain supply of groundwater resources that may not be a long term reliable source of water to support increased development;
- High and very high wildland fire hazard areas;
- Commercial timberlands; and
- Agricultural lands.

Areas within the County that can be characterized as exhibiting some or all of these constraints include the Georgetown Divide, the southwest portion of the County between Latrobe and State Route 49, the south central portion of the County between State Route 49 and the Middle Fork of the Cosumnes River, and the Pleasant Valley area outside of the Pleasant Valley Road corridor.

Development Opportunities

While some areas of the County have development constraints, other areas provide excellent opportunities for future development. Some of these opportunities include:

- Existing land use patterns that contain a supply of land designated for residential, commercial; institutional and industrial uses;
- Areas of relatively flat topography where there are few natural resources;
- The availability of an existing infrastructure system and already-anticipated improvements which will have the capacity to serve new growth; and
- The potential for expanded transit service, including the possibility of an extended light rail system from Sacramento into El Dorado County.

Commercial and Industrial Growth As of 1991, the County is an exporter of employment, with over 24,350 employed residents working outside of the County. Not only does this commute pattern contribute to traffic congestion, air and noise pollution, it is also an economic detriment to the County. Local jobs are the cornerstone of economic prosperity, providing wages, goods, services, and the revenue necessary to support and sustain public services. The County also suffers from a shortage of comparative shopping opportunities. Many of the County's residents travel to Sacramento, Auburn, or Nevada to do their major shopping. This shortage of shopping facilities results in an economic "leakage" whereby expenditures of County residents and sales tax revenues benefit adjacent jurisdictions.

El Dorado County has numerous opportunities to overcome these current disadvantages. Among the County's numerous industrially zoned sites, the El Dorado Hills Business Park and the Diamond Springs industrial area both provide prime sites for industrial and business growth.

The El Dorado Hills Business Park currently consists of approximately 900 acres of land within more than 1,200 acres of an industrially zoned area. Private architectural standards and a Research and Development Zoning district help to ensure architectural design integrity and a campus-like setting within the Business Park. More than 2,000 employees currently work within the Business Park at manufacturing, environmental consulting, engineering, computer software, and research and development occupations. The General Plan anticipates that the Business Park and the surrounding industrial area will continue to grow and develop and could absorb as much as 3.8 million square feet of industrial/business growth over the 20 year time frame of the Plan.

The Diamond Springs industrial area, including the Park West Industrial Park, is approximately 850 acres in size. Most of the nearly 300,000 square feet of existing tenants are traditional industrial uses including: manufacturing, storage, warehousing, and distribution. The industrial area has over 250 acres of vacant land available for new development. Because of its convenient access to U.S. Highway 50, its proximity to the existing communities of El Dorado, Diamond Springs, and Placerville, and the availability of public services and utilities, it is anticipated that this industrial area has the potential to absorb as much as 1 to 1.5 million square feet of additional industrial growth over the 20 year time frame of the Plan.

The development potential of the El Dorado Hills Business Park and the Diamond Springs industrial area have the capacity to absorb 80 to 90 percent of the anticipated 5.8 million square feet of industrial space demand generated by the projected population growth of the County. Other industrially designated lands, including the Barnett Business Park near Cameron Park, the Camino industrial area, the Georgetown Airport Industrial Area and approximately nine other industrial areas within the County, have the potential capacity to provide for increased employment opportunities. The lands designated as Industrial on the General Plan land use map provide for more industrial development than is anticipated to occur within the County during the next 20 years. This excess supply of land will help to ensure a competitive real estate market for industrial and business growth.

Another important employment option within El Dorado County is home occupation. With the expanding capabilities of home computers and telephone communications, more El Dorado County residents are exploring the possibility of operating businesses from their homes. Policies of the General Plan encourage and facilitate this new employment lifestyle by allowing home occupations as an allowed use within residential areas. Home employment helps to reduce reliance on the automobile and reduce commuting pressures.

Opportunities for commercial development within this Plan include the designation of two sites for sub-regional shopping centers (or shopping centers between 200,000 and 500,000 square feet of leasable space). This scale of shopping center would provide for two or three major department store tenants and numerous accessory commercial uses. The two sites that have been identified for this use are: 1) the site at the U.S. Highway 50 Interchange at Latrobe Road (part of the El Dorado Hills Specific Plan Area); and 2) a site adjacent to the existing Prospector Plaza Shopping Center north of the U.S. Highway 50 interchange on Missouri Flat Road. These sites have been selected because they provide easy access from U.S. Highway 50; they are centrally located within the major population concentrations of the County; and they have the necessary infrastructure and services needed to support them. By incorporating these two sub-regional shopping center sites into the Plan along with existing retail centers, the County increases the opportunity to capture a greater share of the jobs, revenues, and sales tax currently leaving the County.

Local and neighborhood shopping opportunities are provided throughout the County within each of the areas designated as Rural Centers and Community Regions. More than 4.4 million total square feet of new retail space is anticipated and planned for in this General Plan.

Topography: El Dorado County is characterized by gently rolling to steep terrain. The few areas within the County that have flat topography present opportunities for higher-density developments. The flatter areas are located primarily south of U.S. Highway 50 adjacent to the Sacramento County line, and along the fairly broad drainage way passing through the communities of El Dorado and Diamond Springs. The General Plan land use map designates both of these areas as being appropriate for intensive, high density development.

Efficient Use of Available Infrastructure: A key principle of this General Plan is to establish a land use pattern that makes the most efficient use of existing infrastructure. In 1991 and 1992, El Dorado County experienced a slowdown in building caused, in part, by a shortage of adequate water supply. The County Water Agency has been working with the County's water purveyors to identify new sources of water, to acquire the necessary water rights, and to develop water supply projects. Once this water has been acquired, the purveyors will rely upon the existing distribution systems (with some new additions) to make this water available to County residents and businesses. The major distribution systems on the Western Slope are provided by the El Dorado Irrigation District (EID) and the Georgetown Divide Public Utility District (GDPUD).

The availability of a community water supply represents a major opportunity for future development. This opportunity is most realized within those areas that will be served by EID's new Placerville Ridge Conduit and the A.D. #3 Conduit. These areas are primarily along the U.S. Highway 50 corridor west of Placerville. As shown on the General Plan land use map, these areas have a potential for growth and can accommodate high density development.

Transit: Another significant opportunity available to the County is to develop a land use pattern that is compatible with and helps to enhance transit service. Many of El Dorado County's residents commute to work outside of the County, contributing to traffic congestion, air quality degradation, and noise pollution. The County currently has a limited, but growing, bus system that provides transit service to Sacramento. Making transit usage as convenient as possible, and minimizing the number of travel modes required, can help increase ridership.

For any type of transit system (bus, light rail, heavy rail, etc.), three land use objectives that can enhance ridership include: 1) planning for a large enough population or employment base to make frequent service to the area economically feasible; 2) concentrating population and/or employment centers in areas that are within a reasonable walking distance from transit stops; and 3) developing the types of land uses that are likely to produce transit riders, such as high-density residential uses, regional-serving office and commercial uses, and industrial/business parks. The General Plan land use map identifies two major areas of the County where these land use objectives can be achieved: adjacent to the Sacramento County line near the El Dorado Hills Business Park, and within the existing community of Diamond Springs. These Communities have an ultimate buildout potential of several thousand residential units. Policy guidelines for these areas provide for a concentrated core of high-density and intensive commercial developments. These core areas would make ideal transit station locations.

The Planned Community designated adjacent to the El Dorado Hills Business Park has the additional potential to be served by an extension of light rail service from Sacramento. The planning, coordination, and funding necessary for the extension of light rail into El Dorado County suggests that this is not a short-term probability but is a very strong possibility within the 20 year time frame of this General Plan. Although not dependent upon light rail service, the Land Use Plan has been developed so as to enhance its viability and to maximize potential ridership.

Housing and Employment: The General Plan designates the areas south of U.S. Highway 50 near the Sacramento County line and the community of Diamond Springs as primary high density growth areas. This is due to their close proximity to the El Dorado Hills Business Park and the Diamond Springs industrial area, two of the County's major employment centers. An opportunity available to El Dorado County is to designate lands for residential use in close proximity to job opportunities thereby allowing County residents to live and work within the same community. While there can be no assurance that employees will also become residents of adjoining communities, the County can, through this land use strategy, increase the opportunities for a local jobs/housing balance.

Community Development

By the year 2015, El Dorado County could likely experience a population increase of 125,284 people in addition to what existed in 1990. This level of growth could have a significant impact on the character of the County if not properly directed. During the General Plan workshops held between 1990 and 1992, the public frequently voiced concern to maintain the County's rural environment. Directing most of the new development into existing or planned new communities will limit the impact this growth will have on the existing rural character. The County is divided into Community Regions, Rural Centers, and Rural Regions. Existing communities and rural centers are listed below:

Communities: Cameron Park, Diamond Springs, El Dorado, El Dorado Hills, Placerville, City of (and the unincorporated portions), Pollock Pines, Shingle Springs

Tahoe Basin Communities: Cascade, Meeks Bay, Meyers, Paradise Flat, Rubicon Bay, South Lake Tahoe, City of (and the unincorporated portions), Tahoma,

Rural Centers: Camino, Coloma, Cool, Fairplay, Garden Valley, Georgetown, Greenwood, Gray's Corner, Grizzly Flat, Kelsey,, Kyburz, Latrobe, Lotus, Mosquito, Mount Ralston, Mt. Aukum, Nashville, Oak Hill, Phillips, Pilot Hill, Pleasant Valley, Quintette, Rescue, Somerset, Strawberry.

Community Regions: The majority of the County's future growth can be accommodated within existing and new communities. Existing communities are distinguished by higher levels of accessibility, available infrastructure and public services, as well as the ability to accommodate a full range of intensive land uses within their boundaries. Existing communities generally have well established land use patterns with significant amounts of vacant land to accommodate a substantial amount of in-fill development.

New communities will occur on those large tracts of undeveloped land located in the western portion of the County near the U.S. Highway 50 corridor. These lands, due to location, size, and nearness to infrastructure, provide the greatest potential to develop well-balanced, sustainable communities with a full range of residential, commercial, employment, and recreational opportunities.

Rural Centers: Rural centers are existing concentrations of commercial and more intensive residential development located throughout the rural regions of the County. Many of these areas were established during or immediately following the gold rush era and survive today. These areas serve as a centralized location for commercial and service opportunities within reasonable driving distance for residents of rural regions. Residential development is less intense than communities, since it is limited by the availability of public/community water and sewer systems. Some limited in-fill, and minor expansion of these areas will likely occur resulting in some limited population growth.

Rural Regions: The remainder of the County is generally described as a rural region which contains large lot development, agricultural land, forest land, or other natural resource lands. These lands have lower levels of available public services, are less accessible, and generally utilize wells and septic systems. It is characteristic of this area to have high concentrations of five and ten acre parcels, as well as large areas of agricultural and resource lands with twenty acre, forty acre, and larger parcels being common. Much of the land within this region that can readily be developed to five and ten acre sites has already occurred. That which remains, for the most part, is steeper, less accessible land that cannot be readily developed without having greater impacts on the environment or without greater development costs to extend infrastructure, mainly roads. For these reasons, even though this type of rural living is popular, it is anticipated the rate of such growth in the rural regions will likely decline.

Criteria for Identifying Boundaries of Communities and Rural Centers: During the preparation of the General Plan Land Use map, the following criteria was used to assist in the definition of boundaries for Communities and Rural Centers.

1. Boundaries of communities and rural centers are based primarily on existing land use patterns and the land's capability to accommodate similar development intensity.
2. Boundaries of communities and rural centers included all existing contiguous land uses of medium density and more intensive land uses.

3. Contiguous undeveloped lands, adjacent to existing community and rural center boundaries, with capability for more intensive land uses (i.e., flat, no significant vegetation, adequate infrastructure, etc.) was included within the adjacent community or rural centers.
4. Boundaries of the community areas reflected the existing location and potential serviceability by public sewer and water.
5. Boundaries of community and rural centers recognized major transportation corridors and travel patterns.
6. Boundaries of rural centers reflected the areas served by public water.
7. Boundaries of community and rural centers also considered the potential for creating transition between nearby like areas, or transition into the rural region.

Growth Monitoring

This General Plan is intended to direct future growth to areas of the County which are appropriate and restricting or regulating growth in areas that have important natural resources or other development constraints consistent with County-wide goals and objectives. It is not intended to serve as a growth control plan that regulates the rate or amount of growth over a given time period. The Land Use designations that are shown on the General Plan land use map reflect the aggregation of goals and objectives and do not attempt to target a specific population increase. The Plan policies are intended to define the basis for the standards and conditions under which growth throughout the County can occur.

Table 2-9 shows that the Draft General Plan land use map designates enough land to accommodate the development of approximately 214,365 new residential units or an increase in population of approximately 609,667 people (at a density of 2.66 persons per unit). The projected population growth within the time frame of the General Plan is approximately 125,284 people. The General Plan will allow for a maximum development potential of more than 4.8 times the growth than is projected to occur during the time frame of the Plan.

Table 2-10 shows the historical trend of development within the County, based on County-issued building permits.

TABLE 2-9
MAXIMUM DEVELOPMENT POTENTIAL

Land Use Type	Average Persons Per Acre ¹	Project Description (Unincorporated County Area)		
		Acres	Maximum Number of Dwelling units	Maximum Potential Population
MFR ²	31.9	1,576	37,824	100,612
HDR ³	8.0	22,347	156,429	416,101
MDR ⁴	1.33	27,547	27,547	73,275
LDR ⁵	.33	129,855	25,971	69,083
RRA ⁶	.18	150,982	15,098	40,161
NR ⁷	.02	210,582	1,316	3,501
PC 1 ⁸		999	1,412	3,911
PC 2 ⁸		710	2,941	8,147
PC 3 ⁸		2,038	7,278	20,160
TOTALS		546,636	275,816	734,951

¹Assumes a population density of 2.66 persons per household, no distinction between multi-family and single family, as it is a County wide average from the 1990 Census.

²Average density factored at 12 dwelling units per acre: $12 * 2.66 = 31.92$.

³Average density factored at 3 dwelling units per acre: $3 * 2.66 = 7.98$.

⁴Average density factored at 2 acres per dwelling unit: $1/2 * 2.66 = 1.33$.

⁵Average density factored at 8 acres per dwelling unit: $1/8 * 2.66 = .332$.

⁶Average density factored at 15 acres per dwelling unit: $1/15 * 2.66 = .0665$.

⁷Average density factored at 160 acres per dwelling unit: $1/160 * 2.66 = .0166$.

⁸New PCs represent new Planned Communities near El Dorado Hills, including a combination of multi-family, high density and medium density residential as well as associated Commercial and public facilities. Projected density and population figures are those proposed by the developers.

Source: El Dorado County Planning Department

TABLE 2-10
BUILDING PERMIT TRENDS, UNINCORPORATED EL DORADO COUNTY (UNITS)

	1987	1988	1989	1990	1991	1992	Average	1993 January-June
New dwelling units permitted:	2,144	2,254	2,014	1,890	1,512	975	1,798	367
Dwelling units finished:	N/A	N/A	N/A	1,714	1,652	1,043	1,470	368

N/A = Not available.

Source: El Dorado County Building Permit Data

Note: Dwelling units include all multi-family units, single family dwellings and permanent mobile homes, excluding temporary mobile homes and mobile homes in mobile home parks.

This annual average in building permits can be compared to the implied 20-year annual average building starts that are provided for under the General Plan, as shown on Table 2-11. The implied annual building starts are arrived at by dividing the total development potential of the General Plan by the 20 year time frame of this Plan. As illustrated, the General Plan would provide enough potential housing to accommodate not only the annual average growth rate in housing units but also could absorb more than the highest one-year total for every year for 20 years.

TABLE 2-11 COMPARISON OF POTENTIAL ANNUAL BUILDING STARTS TO ANNUAL AVERAGE TREND		
20-Year Annual Average Building Starts, Potential	1988 - 1992 Five-Year Average Trend	Anticipated Absorption Rate
3,235	1,729	55.5%
Source: El Dorado County Building Department		

The potential growth that could occur if every parcel were to be developed at its maximum potential is not a realistic possibility for several reasons. First, County zoning of these lands will result in a range of allowable densities within each designation. Zoning designations that provide densities less than the maximum potential of the General Plan will reduce this overall development potential.

Secondly, this projection assumes that all County lands have full development potential. Physical constraints of individual parcels, including roads, wetlands, slopes, and parcel shapes, will reduce the maximum densities from being realized in many cases. Some of the constraints may be off-set by density bonuses granted for various reasons including affordable housing and through planned developments. Only individual development applications will reveal the extent to which physical constraints would reduce the total development potential.

Third, market demand for residential development is not only a function of raw land supply but is also highly dependent upon the availability and costs of infrastructure and services. The policies of this Plan stipulate that land development cannot occur unless appropriate public services and infrastructure are available concurrent with development.

The availability of infrastructure and services will play an increasing role in the development trends of the County's future. The availability of adequate access, the potential to work and live within the same community, housing costs, and the potential for utilizing transit are all factors that will shape and direct the future growth of the County.

LAND USE ANALYSIS

The proposed land use pattern was developed from three basic analyses. First, an inventory was undertaken to determine existing land uses in the County. Second, the County's land was analyzed for its development potential using factors such as topography, important biological resources, choice agricultural soils, availability of water and wastewater infrastructure, fire hazard severity, existing and proposed road capacities, and other constraints. Lastly, an assessment was made to determine the amount of vacant land needed to supply requirements for residential uses, commercial businesses, industrial enterprises, agricultural production, recreation, and public services and facilities. The findings from these analyses were used in conjunction with the community input gathered throughout the General Plan process to arrive at a desirable and appropriate land use pattern for El Dorado County.

General Plan Decision Procedure

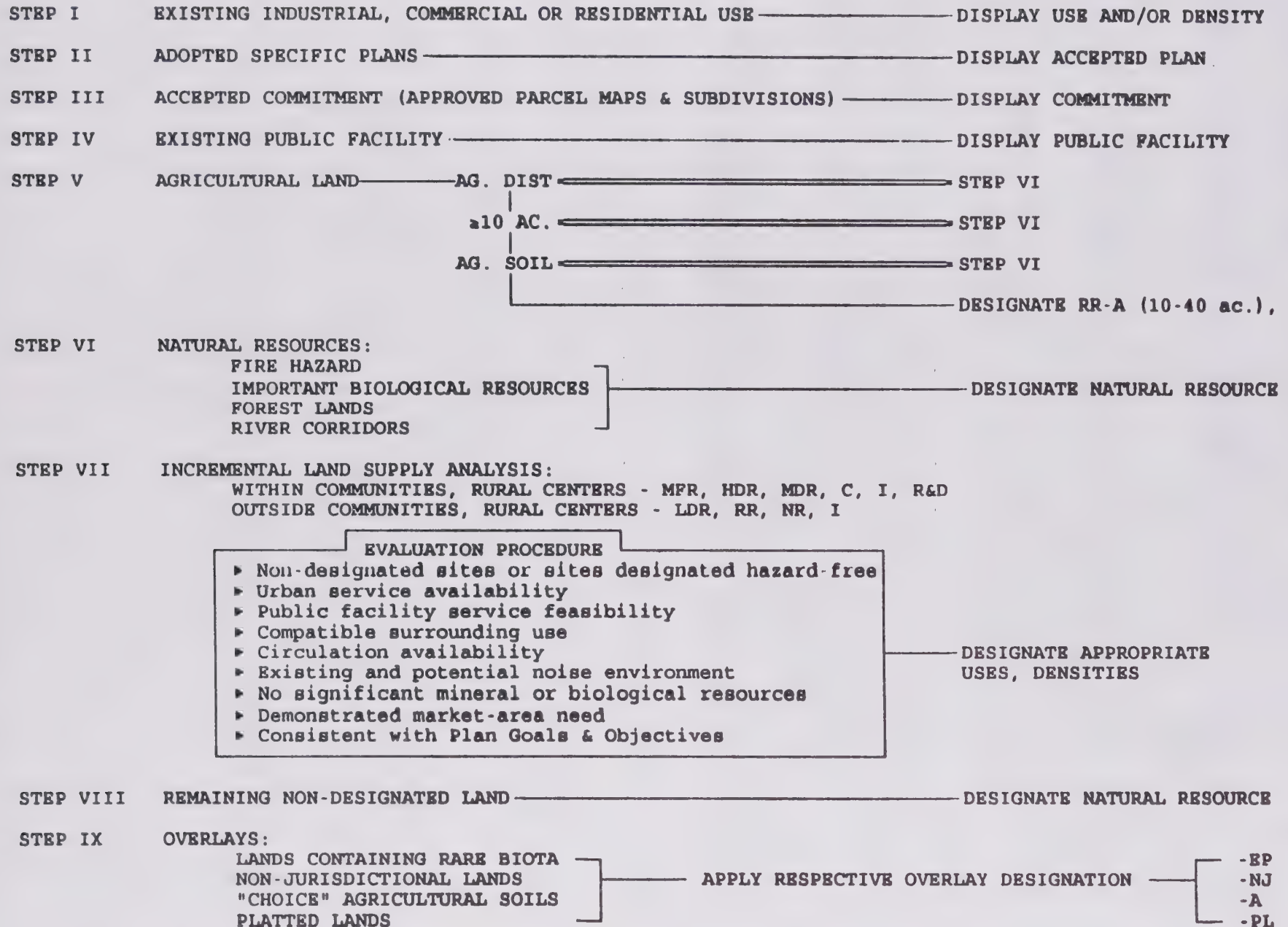
The General Plan Decision Procedure, illustrated in Figure 2-1, provides a programmed method for determining appropriate land use. The following is a narrative of Figure 2-1:

1. Steps I through IV of the General Plan Decision Process consists of recognizing established land uses and commitments by the County, displaying the following on the land use maps: all existing industrial, commercial, and residential uses; existing Area Plans and Specific Plans; finalized subdivisions and designating all public facilities.
2. Steps V and VI include determination of resources such as agricultural lands, timber lands, and natural resources.
3. Step VII consists of evaluating the remaining land based on the following factors:
 - A. Urban service availability - The greater the availability of urban services such as water, sewer, and roads, the higher the potential density.
 - B. Essential services - This includes fire protection, law enforcement, and emergency medical service. In a county with both a significant urban population and large, rural areas, there is inevitably going to be major differences in the level of service. In order to avoid overtaxing the service providers in the rural areas, the densities in those areas must be kept low.
 - C. Compatible surrounding use - It is important to ensure that incompatible land uses are not located adjacent to each other. For instance, High Density Residential should not be located adjacent to Agricultural or airports.

- D. Circulation availability - Many portions of the County do not have adequate circulation systems due to remoteness and topographic constraints. The roads tend to be privately maintained and may not meet County standards. The appropriate designations for these areas are Rural Residential or Natural Resource.
 - E. Existing/potential noise environment - Lands adjacent to significant noise sources (such as a freeway, an industrial park, or an airport) should be designated so as to form a buffer for the noise generating use.
 - F. Significant mineral, biological resources, river canyons, and watersheds - These resources need to be protected by designating them with very low densities.
 - G. Demonstrated market-area need - A market-area analysis identifies the number of potential parcels of various sizes within each of fourteen Market Areas. These numbers can then be compared with the projected demand. If the demand is larger than the supply, the Plan designations can be modified to ensure that potential parcels meet market demand. This can allow the market to operate more freely, without unnecessary constraints.
4. Steps VIII and IX result in designating remaining lands Natural Resource and placement of overlays (example: for rare plants) and showing non-jurisdictional lands.

Figure 2-1
GENERAL PLAN DECISION PROCEDURE

— YES
= NO



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Chapter 3

TRANSPORTATION AND CIRCULATION

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Chapter 3

TRANSPORTATION AND CIRCULATION

THE TRANSPORTATION PROBLEM

El Dorado County is located in the Sierra Nevada foothills and mountains, extending from the edge of California's Central Valley to the Nevada State line.

Terrain in the County is almost entirely hilly or mountainous. Its many river and creek canyons with steep slopes constrain the transportation system and access to many areas. Many areas have only one or two "life-line" roads. Many important roads are narrow and winding. Improvement or reconstruction of such roads is often difficult because of steep, and sometimes unstable, hillsides.

U.S. Highway 50 is the primary transportation corridor in El Dorado County, spanning centrally the length of the County from east to west. The arterial road system connects most communities in the County to U.S. Highway 50, to each other, and to the few other access points to neighboring counties. On a local level, access to property is either direct to the fronting arterial road or via public or private local roads many of which are narrow, unpaved, and "dead end." Urban and suburban areas have better paved and interconnected local street systems.

The City of Placerville and the City of South Lake Tahoe are the only two incorporated cities in the County. Along with El Dorado Hills and Cameron Park, they are the major population centers in El Dorado County. All are located along U.S. Highway 50. A number of suburban communities exist, mostly along the U.S. Highway 50 corridor west of Placerville. Small rural communities are scattered throughout the western half of the County. Except for the South Lake Tahoe area, the eastern half of the County is primarily within the jurisdiction of Eldorado National Forest.

Recreation and tourism are one of El Dorado County's primary industries responsible for a major component of the demand upon the highway system. The Lake Tahoe Basin is a major attraction as well as the Eldorado National Forest including Desolation Wilderness and several ski areas. Other attractions include the American River, Marshall Gold Discovery State Historic Park, Folsom Lake, Sly Park Reservoir and Apple Hill. Visitors come largely from the Sacramento and San Francisco Bay areas.

Employment for a large portion of the residents of western El Dorado County is in the greater Sacramento area for which U.S. Highway 50 serves as a commute route.

It is evident that the El Dorado County major circulation system must support a wide variety of purposes for travel. That wide variety, from commuter use to recreational use, has an equal variety of travel demand characteristics and potential impacts on the circulation system. Transportation planning and policy will need to consider effective utilization of alternative transportation modes as well as a strong integration of land use policy to achieve a balanced, cost-efficient circulation system to meet the growing needs of the County of El Dorado.

New transportation corridors will need to be explored to effectively and efficiently move people and goods with a minimum amount of impact to communities and environment. Expansion of existing and construction of new transportation routes may no longer be the most cost effective means to provide the capacity and safety to meet the growing needs in the future. Careful planning, cost/benefit analysis, and sound implementation strategies will lead to a transportation system that achieves the transportation goals and policies of the County.

The El Dorado County General Plan projects future growth and development through the year 2015 planning time horizon. Such growth and development obviously will not stop after 2015 but will continue. The transportation facilities and services identified as a part of this Circulation Element will meet the transportation needs through the year 2015. Reservation of right-of-way and other considerations will need to be evaluated as the transportation system is improved to provide for potential future expansion of the system to meet the needs of El Dorado County beyond 2015.

Lastly, as the need for new and expanded transportation facilities continues and the competitiveness for State and Federal funding assistance increases, the need to identify creative funding strategies become more critical. El Dorado County already has in existence a variety of local funding programs including assessment districts, zones of benefit, and a traffic impact fee. In order to finance the future transportation needs, the Western Slope traffic impact mitigation fee will need to be updated. To more closely correlate cost to benefits, this updated fee program will be changed to allocate cost and resultant fees by districts. Theoretically, as El Dorado County continues to grow into the twenty first Century, adequate funds will be available to construct the needed transportation infrastructure to maintain the quality of travel flow consistent with the policies of the County. We assume the dominant travel mode during this planning period will be the single occupancy vehicle (SOV). This reliance on the SOV has negative consequences for air quality and congestion given current technology. However, the existing built environment and socio-economic realities allow no cost-effective alternative. Future technological advances and prudent land use decisions can have a beneficial effect by reducing this reliance.

This report focuses on the West Slope of El Dorado County where the majority of development activity has and will occur. The South Lake Tahoe area is not included in the General Plan traffic modeling effort as the Tahoe Basin is under the jurisdiction of the Tahoe Region Planning Agency (TRPA), and their policies and procedures govern traffic circulation in the Basin.

REGIONAL HIGHWAY SYSTEM

The Regional Highway System Component establishes a County-wide highway network intended to develop a coordinated highway system among El Dorado County governmental jurisdictions. This system is depicted on the Regional Highway System (RHS) map (Figure 3-1) and is a key factor in the definition of El Dorado County's transportation policy. The RHS is one of the components of the Circulation Element of El Dorado County's General Plan. A Circulation Element for the unincorporated area is required under California Government Code Section 65302(b).

The main purpose of the RHS is to describe a regional highway system that effectively supports General Plan policies and serves existing and adopted future land uses in both incorporated and unincorporated areas of El Dorado County (Figure 3-2). Extensive coordination with the land use planning and implementation processes carried on by the City of Placerville, City of South Lake Tahoe, the County of El Dorado, and adjacent jurisdictions is essential to develop a consistent intra-community highway system which will effectively serve existing and future land uses.

Background

The RHS will become a central component of the County Circulation Element with the adoption of the General Plan update. This component will be amended on a regular basis, generally in response to land use policy changes within both incorporated and unincorporated areas of the County. These policy changes will be reviewed for impacts on the regional highway system in order to maintain a balance between the land use and transportation plans.

The RHS depicts a network of major thoroughfares comprising urban and rural portions of State highways, six, four and two lane suburban roads, and four and two lane rural roads. This highway network plays a major role in regional travel by connecting to and complementing the local street network. The larger highway and arterial classifications predominantly serve through travel. Smaller roads function as collectors funneling traffic from local streets to the highways and arterials. The overall network of thoroughfares is designed to accommodate existing and projected traffic. The RHS classifications are a statement of policy intended to reserve adequate right-of-way for future highway improvements. Design guidelines and criteria are briefly described for each arterial classification.

The General Plan establishes a policy to maintain an operating Level of Service of D or better on all roadways located within a Community Region or Rural Center and a Level of Service C or better on all roadways located outside a Community Region or Rural Center. The Board has recognized and accepted that LOS C is not attainable in all cases. Level of Service is a qualitative description of travel flow over the County roadway system. Level of Service C is considered an efficient balance of cost and roadway capacity. It has been adopted by many other communities concerned with the quality of travel of their residents and visitors alike.

Consistent with the Federal Highway Capacity Manual, Level of Service is based on a comparison of existing and projected traffic volumes measured against the capacities of those roadways serving that travel demand. Within El Dorado County, textbook urban roadway capacities do not generally apply; therefore, individual calculations for each roadway contained in the Regional Highway System has been made (see Roadway Capacity and Level of Service section). Due to known capacity constraints and the difficulties of construction improvements in some areas, some roadways and key intersections cannot reasonably be expected to be upgraded to achieve Level of Service C conditions currently or in the foreseeable future.

Other Facilities and Considerations

State highways are shown on the RHS map for reference only. Although maintained and operated by the California Department of Transportation (Caltrans), these highways are an integral part of the County-wide transportation system. Coordination between the County, Caltrans, the El Dorado County Local Transportation Commission, and local jurisdictions concerning the planning and construction of improvements to these facilities is essential to meeting regional traffic needs.

State highways are a network of numbered routes throughout the State considered most important for intercounty and intercity travel although they also serve intra-city travel as well. Interstate and U.S. numbered routes are also members of this category and are also maintained by Caltrans. El Dorado County has one U.S. route (U.S. Highway 50) and four other State routes (State Routes 49, 193, 153, and 89). State highways include both freeways and conventional roadways.

Freeways serve both inter- and intra-city travel with the highest possible speed and capacity. They provide no access to adjacent properties but rather connect to selected roads via ramps. All crossings are grade-separated; therefore, traffic is intended to proceed at the maximum speed allowed by law with no interruption. However, slowdowns occur due to non-recurring incidents and when traffic demand approaches capacity.

REGIONAL HIGHWAY SYSTEM (RHS)



NOTE: REFER TO PUL BLU MAP AVAILABLE AT THE COUNTY DEPARTMENT OF TRANSPORTATION FOR GREATER DETAIL.

FIGURE 3-1

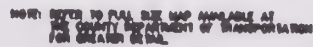


FIGURE 3-2

Transportation Corridor: U.S. Highway 50

U.S. Highway 50 is the "backbone" transportation facility in El Dorado County, spanning centrally the length of the County and extending beyond into Sacramento County and the State of Nevada. It accesses nearly all of the recreation and tourism attractions in and near the County for visitors from the Sacramento and San Francisco Bay areas. U.S. Highway 50 is also the major commute route to employment locations in the greater Sacramento area and the major shipping route in and out of the County. U.S. Highway 50 is a four-lane freeway west of Placerville. Following three signalized intersections in that City, it has some interchanges and some unsignalized intersections east to Ice House Road near Riverton. East of that point, it narrows to a two-lane highway with passing opportunities limited mostly to locations with passing lanes and turnouts. The portion of U.S. Highway 50 in Placerville with signalized intersections becomes particularly congested during weekend travel times because visitors travel to recreational attractions to the east. Other points of congestion are the Forni Road/Placerville Road interchange and the Missouri Flat Road interchange, each heavily loaded by commute and other local traffic.

In the urban South Lake Tahoe area (from near the "Y" junction with State Route 89 to the Nevada State line), U.S. Highway 50 is four lanes wide, controlled by several signals and heavily developed with tourist-oriented and locally oriented businesses. Traffic flow is frequently congested during weekdays and weekends, summer and winter.

This transportation corridor will be a multi-modal facility of four to ten lanes, depending on projected traffic volumes, with a median west of Placerville of sufficient width to accommodate future options such as fixed rail or high occupancy vehicles. The corridor will provide for efficient movement of vehicular traffic where projected volumes exceed major arterial highway capacities. This route will be designed to Caltrans freeway standards.

Other State Highways

State Route 49 serves north-south traffic throughout the Sierra Nevada foothills. In and near El Dorado County, it runs from Plymouth in Amador County through El Dorado to Diamond Springs, Placerville, Coloma, Pilot Hill, Cool, and continues into Auburn in Placer County. The portions between Plymouth and Placerville, Placerville and Coloma, as well as Cool and Auburn, contain sections that are narrow and steep. Its signalized intersection with U.S. Highway 50 in central Placerville contributes to the traffic congestion there.

State Route 193 runs from Placerville to Georgetown to Cool, beginning and ending at two points along State Route 49. It is mostly a 28-foot roadway except for a section near Georgetown and a narrow, steep, winding section just north of Placerville.

State Route 88 follows the Amador County side of the El Dorado/Amador County line for many miles. This route accesses sparsely populated areas along parts of the south side of El Dorado County. Principally, this route provides access from the Stockton/San Joaquin County area to the Lake Tahoe area and also provides access to some skiing and hiking areas in Amador and Alpine counties.

State Route 89 is a north-south route in the northern Sierra Nevada mountains which includes two segments in El Dorado County. One segment begins in Alpine County at State Route 88 and connects to U.S. Highway 50 in Meyers south of the City of South Lake Tahoe. The other segment begins in the City of South Lake Tahoe at the "Y" junction with U.S. Highway 50 and follows the west side of Lake Tahoe north to Tahoe City in Placer County and beyond to Interstate 80. This segment is often closed at Emerald Bay in the winter, forcing traffic between the north shore and the south shore to detour around the Nevada side of Lake Tahoe. Both segments are two lanes wide except for a four-lane section from the South Lake Tahoe "Y" north for 1.1 miles.

State Route 153 runs from State Route 49 to the Marshall Monument in Coloma. It is 0.55 mile in length and is used to access the monument.

ROADWAY CAPACITY AND LEVEL OF SERVICE

To assess the quality of existing traffic conditions, levels of service were calculated for the State highways and major County roads throughout El Dorado County. Level of Service is a general measure of traffic operating conditions whereby a letter grade, A through F, is assigned to a facility. Level of Service A corresponds to the best free-flow conditions. The levels progress toward increased traffic congestion to Level of Service F. Definitions of the level of service grades are as follows:

- Level of Service A represents free flow, excellent level of comfort, convenience, and freedom to maneuver.
- Level of Service B is in the range of stable flow, but the presence of other road users in the traffic stream causes noticeable reductions of comfort, convenience, and maneuvering freedom.
- Level of Service C is in the range of stable flow, but the operation of individual users is significantly affected by interaction with others in the traffic stream.
- Level of Service D represents high-density but stable flow. Users experience severe restriction in speed and freedom to maneuver, with poor levels of comfort and convenience.

- Level of Service E represents operating conditions at or near the capacity level. All speeds are reduced to a low but relatively uniform value. Freedom to maneuver is difficult with users experiencing frustration and poor comfort and convenience. Unstable operations are frequent, where small increases or minor perturbations to the traffic flow can cause breakdown conditions.
- Level of Service F is used to define forced or breakdown conditions. This condition exists wherever the amount of traffic approaching a point exceeds the amount that can traverse the point. Roadways store long queues behind such locations with traffic advancing in stop-and-go waves.

These Level of Service definitions are based on the *1985 Highway Capacity Manual*, Transportation Research Board (TRB) Special Report 209.

The *1985 Highway Capacity Manual* (HCM) contains the prevailing standard procedures used in the United States for the analysis of highway capacity and level of service for most types of facilities. Four chapters of the *1985 Highway Capacity Manual* have been updated and approved for publication. This report uses a modified version of the HCM's analysis procedures for rural, two-lane highways; rural, multi-lane highways; and freeways. These types of facilities, and the conditions assumed in their analysis procedures, predominate the transportation system of El Dorado County.

The HCM defines levels of service for freeways and rural, multi-lane highways in terms of the density of vehicles on the road; that is, vehicles per mile per lane. This measure relates best to a vehicle's freedom to maneuver and proximity to other vehicles. For rural, two-lane highways, the HCM uses a service volume concept to determine levels of service. The service volume concept uses percent-time delay as the primary measure. This is the average percent of the time that vehicles are delayed while traveling in platoons because of the inability to pass. For both types of facilities, speeds remain relatively close to maximum up to approximately Level of Service D.

Both vehicle density and percent-time delay are difficult to measure in the field or to project into the future so the HCM presents analysis methodologies that estimate these variables from the following more measurable and predictable traffic and roadway characteristics:

- traffic volume (counted or average daily traffic volumes were available for each roadway; the peak-hour fraction was assumed);
- the directional split of the traffic;
- lane widths and lateral clearance;
- shoulder widths;
- terrain (level/rolling/mountainous);

- fraction of the roadway designated as no-passing zones;
- design speed; and
- traffic composition, including fractions of trucks and recreational vehicles.

Table 3-1 presents a summary of current traffic volumes and the levels of service calculated for the important roadways throughout the County. These traffic counts are the most recent available from an ongoing count program by the El Dorado County Department of Transportation. Figure 3-3 graphically shows the existing level of service on major County roads.

Although many numbers in Table 3-1 are not rounded, accuracy or precision to the single vehicle is not meant to be implied. The traffic counts, normally taken for a few days at a time, are samples rather than true average daily traffic.

TABLE 3-1 EL DORADO COUNTY ROADS TRAFFIC VOLUMES AND LEVELS OF SERVICE						
Street	From/To	Lanes	Width	Count	Year	LOS
Bass Lake Road	Country Club Road/Bass Lake	2	20	1,818	93	B
	Bass Lake/Green Valley Road	2	20	1,547	93	B
Bucks Bar Road	Pleasant Valley Road/West Fork Cosumnes	2	22	3,433	92	C
	River West Fork Cosumnes/Mt. Aukum Road	2	22	3,018	92	C
Cambridge Road	Crazy Horse Road/U.S. Highway 50	2	30	5,515	92	C
	U.S. Highway 50/Country Club Drive	2	30	6,626	92	C
	Country Club Drive/Oxford Road	2	34	6,447	92	D
	Oxford Road/Gateway Drive	2	34	3,870	92	C
	Gateway Drive/Green Valley Road	2	34	2,854	92	B
Cameron Park Drive	Robin Lane/Coach Lane	2	40	6,749	92	C
	Coach Lane/EB U.S. Highway 50 ramps	4	60	21,479	93	B
	EB U.S. Highway 50 ramps/Palmer Drive	4	60	21,181	93	B
	Palmer Drive/Hacienda Drive	2	30-45	15,962	93	E
	Hacienda Drive/Meder Road	2	30-45	12,648	93	E
	Meder Road/Alhambra Drive	2	30-45	11,056	93	E
	Alhambra Drive/Green Valley Road	2	32-45	6,910	93	D
Carson Road	Schnell School Road/Union Ridge Road	2	23	1,871	92	B
	Union Ridge Road/Camino Heights Road	2	23	1,531	92	B
	Camino Heights Road/Barkley	2	23	1,241	92	A
	Barkley/Pony Express Trail and U.S. Highway 50	2	23	4,328	92	C
Cedar Ravine Road	City Limits/Quarry Road	2	22	2,422	90	B
	Quarry Road/Pleasant Valley Road	2	22	1,739	92	B
Cold Springs Road	State Route 49/Gold Hill Road	2	20	1,890	93	B
	Gold Hill Road/Cold Springs Creek	2	19	3,021	92	C
	Cold Springs Creek/Placerville Drive	2	22	8,029	92	E
Country Club Drive	Bass Lake Road/Bounty Road	2	29	1,504	93	B
	Bounty Road/Cambridge Road	2	29	1,393	93	B
	Cambridge Road/DeSabra Road	2	29	2,795	93	B
	DeSabra Road/Cameron Park Drive	2	29	4,526	93	C

TABLE 3-1
EL DORADO COUNTY ROADS TRAFFIC VOLUMES AND LEVELS OF SERVICE

Street	From/To	Lanes	Width	Count	Year	LOS
Deer Valley Road	Green Valley Road/Starbuck Road	2	20	735	92	A
	Jurgens Road/Green Valley Road	2	20	840	92	A
Durock Road	Robin Lane/Rodeo Road	2	24	4,639	92	C
	Rodeo Road/Business Drive	2	24	3,882	93	C
	Business Drive/South Shingle Road	2	24	4,793	93	C
El Dorado Hills Boulevard	U.S. Highway 50/Village Green Parkway	4	80	13,224	92	B
	Village Green Parkway/Harvard Way	2	40	11,709	93	E
	Harvard Way/Francisco Drive	2	40	9,329	92	D
	Francisco Drive/Green Valley Road (new)	2	Divided	3,357	92	B
El Dorado Road	Pleasant Valley Road/Mother Lode Drive	2	18	1,503	93	B
	Mother Lode Drive/U.S. Highway 50	2	18	2,941	93	C
	U.S. Highway 50/Missouri Flat Road	2	23	1,593	93	B
	N/O Missouri Flat Road	2	18	1,385	93	B
Fairplay Road	Mt. Aukum Road/Perry Creek Road	2	22	1,878	92	B
	Perry Creek Road/Omo Ranch Road	2	22	588	92	A
Garden Valley Road	Marshall Road/State Route 193	2	18	1,774	92	B
Gold Hill Road	Lotus Road/Cold Springs Road	2	22	1,332	92	B
	Cold Springs Road/State Route 49	2	22	430	92	A
Greenstone Road	Mother Lode Drive/U.S. Highway 50	2	22	736	92	A
	U.S. Highway 50/Green Valley Road	2	22	2,081	92	B
Green Valley Road	County line/Francisco Drive	2	36	14,821	93	E
	Francisco Drive/Salmon Falls Road	2	36	9,402	93	D
	Salmon Falls Road/Deer Valley Road	2	36	6,607	93	C
	Deer Valley Road/Cameron Park Drive	2	36	8,285	93	D
	Cameron Park Drive/Deer Valley Road	2	22	5,429	93	D
	Deer Valley Road/North Shingle Road	2	22	4,248	93	C
	North Shingle Road/Lotus Road	2	22	6,011	93	D
	Lotus Road/Missouri Flat Road	2	22	3,352	93	C
Greenwood Road	State Route 193/Gray Bar Mine Road	2	21	881	90	A
	Gray Bar Mine Road/Marshall Road	2	21	1,065	93	B
Grizzly Flat Road	Mt. Aukum Road/Sweeney Road	2	21	1,910	92	B
	Sweeney Road/End	2	21	1,101	92	B
Ice House Road	U.S. Highway 50/Peavine Ridge Road	2	24	1,180	90	B
	Peavine Ridge Road/South Fork Silver Creek	2	24	884	90	A
	South Fork Silver Creek/Big Silver Creek	2	24	758	90	A
Latrobe Road	U.S. Highway 50/White Rock Road	2	40	6,961	92	C
	White Rock Road/Investment Boulevard	2	40	5,441	92	C
	Investment Boulevard/Wetsal Oviatt Road	2	40	2,195	92	B
	Wetsal Oviatt Road/South Shingle Road	2	20	1,370	92	B
	South Shingle Road/Cosumnes River	2	40	1,333	92	D
Lotus Road	Green Valley Road/Gold Hill Road	2	24	6,305	92	D
	Gold Hill Road/Bassi Road	2	22	3,457	93	C
	Bassi Road/State Route 49	2	23	3,391	93	C
Marshall Road	State Route 49/Mt. Murphy Road	2	24	2,579	93	B
	Mt. Murphy Road/Greenwood Road	2	24	3,491	92	B

TABLE 3-1
EL DORADO COUNTY ROADS TRAFFIC VOLUMES AND LEVELS OF SERVICE

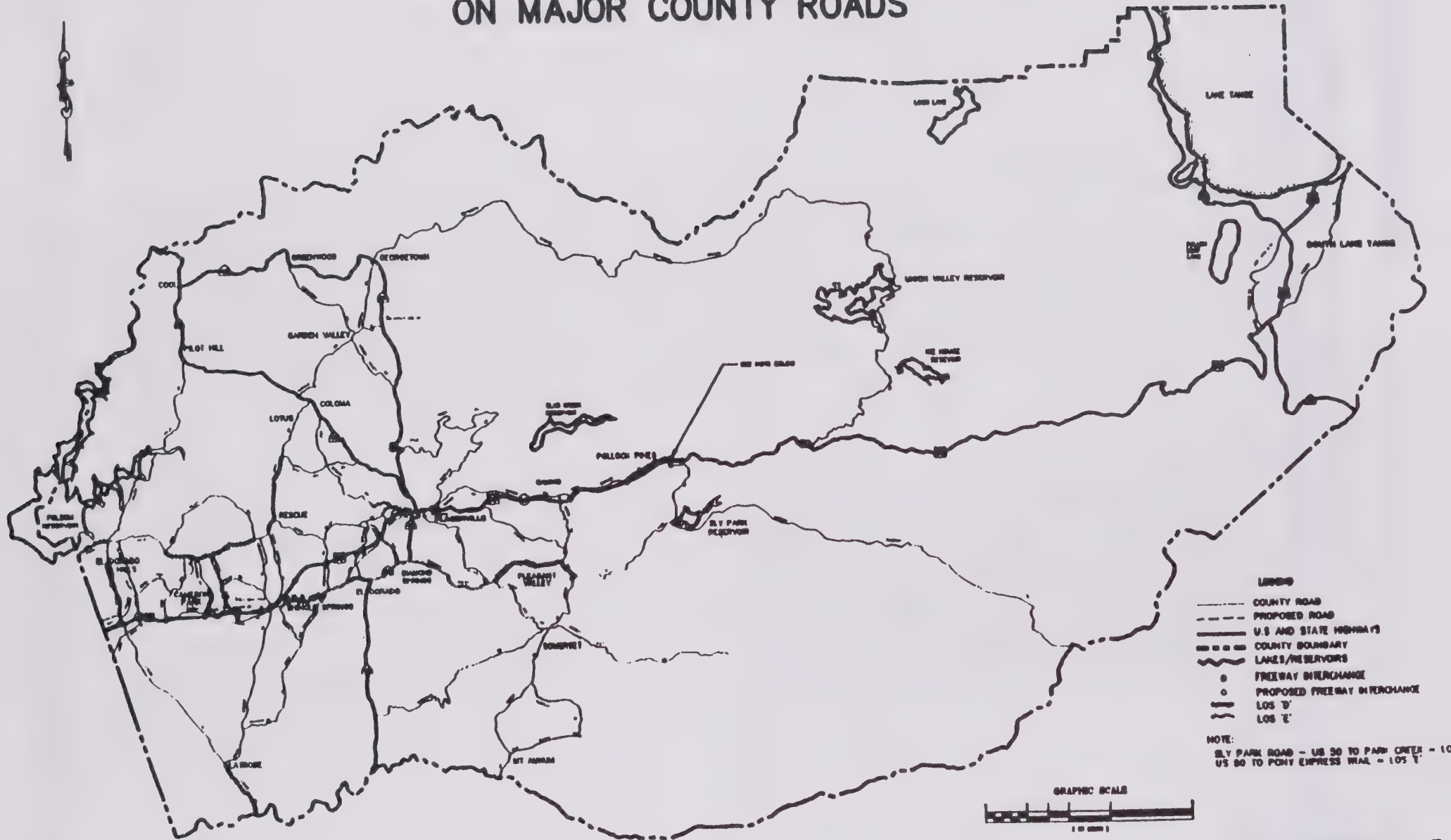
Street	From/To	Lanes	Width	Count	Year	LOS
Meder Road	Cameron Park Road/Rosebud Road	2	20	1,811	92	B
	Rsebud Road/Ponderosa Road	2	20	2,039	92	B
Missouri Flat Road	Green Valley Road/El Dorado Road	2	40	3,905	93	C
	El Dorado Road/Plaza Drive	2	40	4,857	93	C
	Plaza Drive/U.S.Highway 50	2	40	15,859	93	E
	U.S. Highway 50/Mother Lode Drive	2	40	23,815	93	E
	Mother Lode Drive/Forni Road	2	40	19,997	93	E
	Forni Road/China Garden Road	2	40	18,039	93	E
	China Garden Road/Enterprise Drive	2	40	14,124	93	E
	Enterprise Drive/State Route 49	2	40	10,856	93	E
Mormon Emigrant Trail	Sly Park Road/East Dam	2	20	1,180	92	B
Mosquito Road	U.S. Highway 50/Union Ridge Road	2	20	1,822	92	B
	Union Ridge Road/Rock Creek Road	2	20	645	92	B
Mother Lode Drive	South Shingle Road/Greenstone Road	2	30-40	13,122	93	E
	Greenstone Road/Pleasant Valley Road	2	28	8,607	93	E
	Pleasant Valley Road/El Dorado Road	2	24	3,666	93	C
	El Dorado Road/Missouri Flat Road	2	24	4,252	93	C
Mt. Aukum Road	County Line/Omo Ranch Road	2	23	1,658	92	B
	Omo Ranch Road/Bucks Bar Road	2	23-24	3,241	92	C
	Bucks Bar Road/Sly Park Road	2	23	3,242	92	C
Newtown Road	U.S. Highway 50/Weber Creek	2	24	2,704	93	C
	Weber Creek/Snows Road	2	22	2,563	93	C
	Snows Road/Pleasant Valley Road	2	20	3,665	93	C
North Shingle Road	Ponderosa Road/Tennessee Drive	2	22	6,373	91	D
	Tennessee Drive/Green Valley Road	2	22	4,882	91	D
Old French Town Road	South of Mother Lode Drive	2	22	1,057	92	B
Omo Ranch Road	Mt. Aukum Road/Fairplay Road	2	22	921	92	A
	Fairplay Road/Slug Gulch Road	2	22	408	92	A
	Slug Gulch Road/Amador County Line	2	22	301	92	A
Oxford Road	Cambridge Road/Cameron Park Drive	2	26	3,393	92	C
Pioneer Trail	North of Black Bart Avenue	2	N/A	10,452	92	E
	Black Bart Avenue/Golden Bear Trail	2		7,448	92	D
	Golden Bear Trail/East of U.S. Highway 50	2		5,757	92	C
Pleasant Valley Road	Mother Lode Drive/El Dorado Road	2	24	6,390	93	D
	El Dorado Road/State Route 49	2	24	7,983	93	E
	Diamond Springs/Big Cut Road	2	40	13,736	93	E
	Big Cut Road/Oak Hill Road	2	24	10,396	93	E
	Oak Hill Road/Cedar Ravine Road	2	24	8,887	93	E
	Cedar Ravine Road/Bucks Bar Road	2	22	8,187	92	E
	Bucks Bar Road/Newtown Road	2	22	5,034	92	D
	Newtown Road/Mt. Aukum Road	2	22	5,415	93	D
Pony Express Trail	Carson Road/Ridgeway Drive	2	24	3,761	92	C
	Ridgeway Drive/Sly Park Road	2	36	7,736	92	D
Rattlesnake Bar Road	State Route 49/Folsom Lake	2	18	853	92	A
Rock Creek Road	State Route 193/Mosquito Road	2	22	294	91	A

TABLE 3-1
EL DORADO COUNTY ROADS TRAFFIC VOLUMES AND LEVELS OF SERVICE

Street	From/To	Lanes	Width	Count	Year	LOS
Salmon Falls Road	Green Valley Road/Lake Hills Boulevard	2	23	5,434	92	C
	Lake Hills Boulevard/Manzanita Lane	2	32	1,471	93	B
	Manzanita Lane/South Fork American River	1	22	837	93	A
	South Fork American River/State Route 49	2	21	450	92	A
Sly Park Road	Mt. Aukum Road/Clear Creek	2	22	3,194	92	C
	Clear Creek/Mormon Emigrant Trail	2	22	2,136	92	B
	Mormon Emigrant Trail/Park Creek Road	2	22	4,113	92	C
	Park Creek Road/U.S. Highway 50	2	22	5,587	92	D
	U.S. Highway 50/Pony Express Trail	2	22	8,268	92	E
Snows Road	Newtown Road/Carson Road	2	19	1,056	91	B
	South of Carson Road	2	24	2,025	91	B
South Shingle Road	Latrobe Road/Brandon Road	2	16	511	92	A
	Brandon Road/Barnett Ranch Road	2	22	1,425	92	B
	Barnett Ranch Road/U.S. Highway 50	2	22	4,486	92	C
Union Ridge Road	Mosquito Road/Carson Road	2	20	688	93	A
Wentworth Springs Road	State Route 193/Georgetown Ranger's Station	2	24	2,332	90	B
	Georgetown Ranger's Station/Volcanoville	2	22	595	90	A
White Rock Road	County Line/Latrobe Road	2	22	1,517	92	B
	Latrobe Road/Silva Valley Road	2	22	832	92	B

Source: El Dorado County Department of Transportation

EXISTING LEVEL OF SERVICE (LOS) ON MAJOR COUNTY ROADS



NOTE: REFER TO FULL SIZE MAP AVAILABLE AT
 THE COUNTY DEPARTMENT OF TRANSPORTATION
 FOR GREATER DETAIL.

FIGURE 3-3

The levels of service on State highways in El Dorado County were reported for various years and projected for future years in *Route Concept Reports (RCR)* released by Caltrans. These appear below in Table 3-2. Also listed is Caltrans's desired level of service for the 20 year horizon. The desired, or concept Level of Service varies by location.

TABLE 3-2
STATE HIGHWAYS IN EL DORADO COUNTY LEVELS OF SERVICE

Route	From/To	Base Year LOS	Projected LOS	Concept LOS
50*	Sacramento County line to Placerville	C	C	C
	In Placerville (slowed by traffic signals)	B	D	D
	Placerville to Riverton	B	B	C
	Riverton to Meyers (snow and ice slow traffic over summit in winter)	E	F	C
	Meyers to Nevada State line	E	F	C
49**	Amador County line to Placerville	D/E	E	D
	In Placerville	E	F	D
	Placerville to Placer County line	E	F	D
89***	Alpine County line to U.S. Highway 50 at Meyers	E	E	F
	U.S. Highway 50 in South Lake Tahoe to Placer County	E/F	F	F
153*	All in El Dorado County	B	C	E
193*	All in El Dorado County	D	E	D

* Base Year LOS - 1984, Projected LOS - 1995, Concept LOS - 2005

** Base Year LOS - 1987, Projected LOS - 2000, Concept LOS - 2010

*** Base Year LOS - 1988, Projected LOS - 2000, Concept LOS - 2010

Source: El Dorado County Department of Transportation

TRAFFIC ACCIDENT HISTORY

Recent accident history in El Dorado County was researched to identify primary accident factors and high accident locations. The purpose of this investigation was to identify any problems that may be addressed within the scope of transportation planning for the General Plan which may lead to identification of general goals for safety improvement on County roads. This is not a detailed traffic engineering study of County road accidents; the El Dorado County Department of Transportation maintains an on-going program of more detailed traffic engineering analysis of accidents on County roads in their annual accident summary report.

The accident history summaries presented in Tables 3-3 and 3-4 are from the years 1990, 1991, and 1992 on streets in El Dorado County. This excludes streets in the Cities of Placerville and South Lake Tahoe and State highways (under Caltrans); but it does include streets in the unin-

corporated fringe of South Lake Tahoe. Tables 3-3 and 3-4 were summarized from accident records provided by the El Dorado County Department of Transportation. The County derived this information from the Statewide Integrated Records System (SWITRS) which contains detailed information from individual accident reports by the California Highway Patrol.

TABLE 3-3
COUNTY ROAD ACCIDENT SUMMARY BY SEVERITY AND YEAR

Year	PDO*	Injury	Fatality	TOTAL
1990	514	415	11	940
1991	453	409	13	875
1992	428	396	15	839
TOTAL	1,395	1,220	39	2,654

*PDO = property damage only (no injury or fatality)

Source: El Dorado County Department of Transportation

TABLE 3-4
INTERSECTIONS WITH SIX OR MORE ACCIDENTS IN 1990 TO 1993

Accidents in 3 Years	Intersection
27	Cameron Park Drive/Coach Lane
23	Cameron Park Drive/U.S. Highway 50 eastbound ramp
21	Green Valley Road/Cameron Park Drive - Starbuck Road
21	Missouri Flat Road/Enterprise Drive
18	Missouri Flat Road/Mother Lode Drive
13	El Dorado Hills/Saratoga Way
13	Green Valley Road/Deer Valley Road
11	Green Valley Road/North Shingle Road
9	Green Valley Road/Cambridge Road
9	Pleasant Valley Road/Bucks Bar Road
8	Latrobe Road/U.S. Highway 50 eastbound ramp
8	Mother Lode Drive/Old French Town Road
7	Cameron Park Drive/Country Club Drive - U.S. Highway 50 westbound ramps
7	Pleasant Valley Road/Big Cut Road
7	South Shingle Road/Durock Road
6	Harvard Way/Clermont Way
6	Missouri Flat Road/El Dorado Road

Source: El Dorado County Department of Transportation

Based on accident spot maps provided by El Dorado County Department of Transportation, the following general observations can be made:

- Most of the accidents on rural roads were single-vehicle, such as running off the road. They are usually randomly dispersed.
- Most of the accidents on roads in urbanized areas, especially congested roads, were multi-vehicle collisions.

The historical accident information presented in Table 3-5 was reported for State highways in Caltrans's *Route Concept Reports*. Some segments had more than the State average for comparable facilities, but none were identified as within a threshold level of concern.

TABLE 3-5 STATE HIGHWAY ACCIDENT SUMMARY			
Route	From/To	Total Accident Rate versus State Average	Fatality/Injury Accident Rate Versus State Average
50	Sacramento County line to Placerville	0.50	0.61
	In Placerville	1.24	1.30
	Placerville to Riverton	0.90	1.28
	Riverton to Meyers	0.68	0.64
	Meyers to junction with State Highway 89 in South Lake Tahoe	0.63	0.71
	Junction with State Highway 89 to Nevada State line	1.07	1.07
49	Amador County line in Placerville	0.97	0.62
	In Placerville	1.54	1.44
	Placerville to Placer County line	1.60	1.64
89	Alpine County line to Junction with U.S. Highway 50 in Meyers	0.73	0.66
	U.S. Highway 50 in South Lake Tahoe north 1.1 miles	0.32	0.42
	Remainder to Placer County	1.00	0.97
153	All in El Dorado County	0.00	0.00
193	All in El Dorado County	0.70	0.80
Source: El Dorado County Department of Transportation			

"Accident Rate vs. State Average" is the ratio of that segment's accident rate to the Statewide average. A ratio > 1.0 is indicative of an accident rate higher than the State's average for similar facilities.

LOCAL AND REGIONAL TRANSPORTATION IMPROVEMENT PLANS

For each State highway, Caltrans has prepared a Route Concept Report (RCR) containing its goals for the development of each route in terms of level of service, broadly identifies the nature and extent of improvements needed to reach those goals, and provides the basis for the preparation of route development plans and related information. Many recommendations are optional depending on available levels of funding and other influences. Route development strategies for State highways in El Dorado County contained in RCRs are as follows:

U.S. Highway 50 (RCR of 1986; revision is in progress and not released)

- Add median lanes from Sacramento County to Missouri Flat Road after 1995, resulting in a six-lane freeway.
- Construct the planned Ray Lawyer Drive interchange.
- Improve traffic flow through central Placerville by widening and constructing new overcrossings.
- Possibly construct safety rest stop near Pollock Pines.
- From east of Placerville to Ice House Road near Riverton, construct improvements leading eventually to a four- or six-lane freeway.
- East of Ice House Road, construct in piecemeal manner various curve improvements, passing lanes, channelization, and widening leading eventually to a four-lane conventional highway. Such improvement is difficult and expensive, being located on a steep, unstable canyon slope.
- Because of severe environmental restrictions, no major improvements are planned in the South Lake Tahoe area. Widening the two-lane portion east of Meyers to four lanes has been proposed. A freeway bypass from Meyers to the Nevada State line has been proposed in the past but is not considered in the Route Concept Report likely due to the potential for significant environmental effects.

The City of Placerville and Caltrans have begun to study alternative major improvements to U.S. Highway 50 through central Placerville. These alternatives are discussed later.

State Route 49 (RCR of 1990)

- Widen State Route 49 from the Amador County line to El Dorado to a minimum of 40 feet and include left turn channelization and passing lanes wherever possible.

- Bypass existing State Route 49 from El Dorado to Placerville on a new alignment (staged four-lane expressway) ultimately to connect to the adopted alignment from Placerville to Lotus. This would require a Route Adoption Study.
- Construct a staged four-lane expressway on a new alignment from Placerville to Lotus. The unconstructed adopted alignment is 24 years old, and a new Route Adoption Study is warranted.

State Route 89 (RCR of 1989)

- No major improvements are proposed.

State Route 153 (RCR of 1987)

- No major improvement are proposed.

State Route 193 (RCR of 1987)

- Replace the bridge over the South Fork of the American River.
- Consider relinquishing this route from the State to El Dorado County. The County's Transportation Commission responded in opposition to this consideration during the review of this route concept report.

New Roadways

The General Plan for El Dorado County identifies the need for the following new roads in addition to new State highway construction:

- A network of arterial and local roads west of El Dorado Hills and between El Dorado Hills and Cameron Park within major urban development planned for that area. Two new interchanges with U.S. Highway 50 are included, one in Sacramento County near the County line, the other at Silva Valley Road.
- A new road connecting to Russell Ranch Boulevard in the City of Folsom, crossing the County line and connecting to Green Valley Road.
- An extension of Missouri Flat Road north to Cold Springs Road.
- An extension of Saratoga Road to connect to the City of Folsom.
- A road connecting Missouri Flat Road, State Route 49, and Pleasant Valley Road east of Diamond Springs.
- An extension of El Dorado Road to connect to State Route 49 south of El Dorado.

- An extension of Ray Lawyer Drive from the planned Ray Lawyer Drive interchange at U.S. Highway 50, proceeding easterly just south of Placerville, connecting to State Route 49.

U.S. Highway 50 Through Placerville (Central Urban Corridor)

Caltrans, working with the City of Placerville, is conducting a feasibility study, Project Study Report (PSR), of major improvements to U.S. Highway 50 in Placerville.

The proposed joint City of Placerville, El Dorado County, and Caltrans project has been named the Central Urban Corridor. This project has five major components:

- Central Placerville/Ray Lawyer Drive Interchange. This proposed component is a full service interchange crossing U.S. Highway 50 at the Ray Lawyer Drive extension.
- U.S. Highway 50 improvements. This component proposes the realignment of U.S. Highway 50. It will eliminate the signal at Canal Street. Placerville Drive will be realigned to cross under the new alignment and connect directly to Main Street.
- Forni Road. Forni Road will be reconfigured as a frontage road from the Central Placerville Interchange to Main Street.
- Placerville Drive. Placerville Drive will be widened from the U.S. Highway 50 undercrossing near Canal Street to the Forni/Placerville Interchange.
- Improvements to the Forni/Placerville Interchange.

This large project will be presented to the California Transportation Commission (CTC) at the end of the 1993 calendar year for their consideration and approval. The CTC has approved right-of-way funds (\$12.7 million dollars) for this project in the 1992 STIP.

PUBLIC TRANSPORTATION SYSTEMS

Overview

The primary purpose of the Public Transportation System (PTS) component is to outline the policies and practices which will promote the incorporation of public transportation into the transportation network.

Public transportation on the Western Slope of El Dorado County consists of several key components including El Dorado Transit, commercial bus services, taxi service, van pools, car pools, and park-and-ride facilities. Public transportation is beginning to play an important role in the transportation makeup of the County.

The County has several opportunities to provide rail transportation services for both passenger and freight traffic. Sacramento Regional Transit has a proposal to extend its light rail system to Hazel Avenue in Sacramento County. The City of Folsom has proposed the extension of this line into the City of Folsom. El Dorado County is proposing to extend this line into the County to access a Multi-Modal Transfer Facility proposed for the El Dorado Hills area south of U.S. Highway 50.

The County is pursuing the purchase of the existing Southern Pacific Railroad trackage and right-of-way. One option for this property in the future is for the County to develop it as an operating railroad to carry passengers and/or freight. This corridor may also be used for other transportation purposes such as bicycle, hiking, and equestrian trails, roads, or utility lines.

El Dorado Transit provides general public transit service to the residents of the Western Slope of El Dorado County. Under the jurisdiction of the Joint Transit Agency (JTA), El Dorado Transit offers scheduled fixed-route service, daily commute service to Sacramento, and dial-a-ride service in Placerville and outlying communities as well as chartered social service routes.

The growth in El Dorado County, in both numbers of people and in vehicles, creates a desirable and feasible environment for an expanded role of public transit.

Public transit in El Dorado County is currently providing life-line service to the elderly and disabled and to the commuter who makes daily roundtrips to Sacramento.

Expanded public transportation is feasible. The growth in the County reflects a high rate of commuting exceeding an average roundtrip length of 28 miles per day. Many areas of the County are still developing, and work sites are spread from Placerville westward. The commute to job sites in the Sacramento area is significant and growing. More and more people are selecting the western portions of the County for housing while maintaining jobs at Sacramento locations. Public transportation is one response to a demand to provide operational capacity, routes, and headway to encourage commuters.

TABLE 3-6
EL DORADO TRANSIT ROUTE INFORMATION

Route Locations	Trips per Weekday Each Way	Days of Service
Placerville Area Shuttle Service	22	Mon-Sat*
Placerville-Diamond Springs-El Dorado-Shingle Springs-Cameron Park	10	Mon-Fri
Placerville-Camino-Pollock Pines	14	Mon-Sat*
Placerville-Sacramento Commute	8	Mon-Fri
Dial-A-Ride (phone reservations, door-to-door)	Varies	Mon-Fri

*Fewer trips and stops are provided on Saturdays.

Source: El Dorado County Department of Transportation

Van Pools

A van pool is an arrangement whereby a driver, coordinator, employer, or other organization owns and operates a van that commuters ride often paying their share of costs on a monthly basis. Caltrans' Sacramento Rideshare program advises employers, van owners, and commuters in forming van pools and establishing their financing, insurance, vehicle maintenance, and other matters.

TABLE 3-7
EL DORADO COUNTY VAN POOLS, 1990

Route		Number of Van Pools
<i>Open to all commuters</i>		
Placerville	Downtown Sacramento	1
Shingle Springs	McClellan AFB	1
Shingle Springs	Ninth & O, Sacramento	1
Subtotal		3
<i>Lease Vans - SMUD/PG&E Employees Only</i>		
Missouri Flat Road	Downtown Sacramento	3
Placerville	Downtown Sacramento	4
Subtotal		7
<i>State Employees Only by a State-reimbursed Program</i>		
Cameron Park	Downtown Sacramento	4
Diamond Springs	Downtown Sacramento	2
El Dorado Hills	Downtown Sacramento	2
Garden Valley	Downtown Sacramento	1
Placerville	Downtown Sacramento	2
Pollock Pines	Downtown Sacramento	1
Shingle Springs	Downtown Sacramento	2
Subtotal		14
TOTAL		24
Source: Caltrans Sacramento Rideshare, 1993		

Rail Services

There is no passenger rail service in El Dorado County. The County is working with other jurisdictions to pursue the extension of rail service from Sacramento into El Dorado County.

Park-and-Ride Facilities

El Dorado County and Caltrans have a continuous program to develop park-and-ride facilities. These are areas where car poolers, van poolers, and bus riders can park their cars and share rides primarily for commute trips. Parking is free and no permits or stickers are required.

Enclosed bicycle lockers are available at some locations which offer secure bicycle storage for those who bicycle to the park-and-ride-lots. There are ten park-and-ride facilities in El Dorado County, all adjacent to U.S. Highway 50. Table 3-8 lists information about the park-and-ride locations in the County.

TABLE 3-8 PARK-AND-RIDE FACILITIES		
Location	Paved Parking Spaces	Bicycle Lockers
Saratoga Way at El Dorado Hills Boulevard in EDH (El Dorado Transit)	30	4
Cambridge Road in Cameron Park	33	12
At Shingle Springs interchange		
Ponderosa Road and North Shingle Road	28	0
Ponderosa Road and Wild Chaparral Drive	111	4
Durock Road and South Shingle Springs Road	56	4
Shingle Springs Drive (East Shingle Springs)	20	0
Greenstone Road	22	0
State Route 193 at State Route 49 in Cool	14	0
Missouri Flat Road at Forni Road (El Dorado Transit)	30	0
Missouri Flat Road at Mother Lode Drive	70	0
TOTAL	414	24
Source: Caltrans Sacramento Rideshare, 1993 El Dorado Transit, 1993		

Some commuters may be using various streets and shopping center parking lots as informal de facto park-and-ride lots.

Caltrans provides a rideshare matching service. Persons interested in joining or starting a car pool can call a phone number posted at the park-and-ride lots to obtain a computerized referral listing of prospective ride partners with similar commute origins and destinations. The inquirer would also be added to this list for subsequent referral. Use of this service is not required in order to use park-and-ride lots.

TRANSPORTATION DEMAND MANAGEMENT (TDM)

Transportation Demand Management (TDM) seeks to lessen the overall demand on the transportation system by attempting to modify people's driving behavior. Advocating the increased use of alternate forms of transportation is one way TDM strives to reduce the use of the Single Occupant Vehicle (SOV). The reduction of SOV trips can translate into a decreased demand on the road system and a reduction in Vehicle Miles Traveled (VMT).

El Dorado County prepared a Clean Air Act Plan (CAAP) in response to the State and Federal regulations regarding air quality compliance. The CAAP contains several strategies for attempting to alter driving behavior. Transportation Control Measures (TCMs) are the main strategy of CAAP. The County has chosen to structure the TCMs to emphasize educating drivers about their behavior and its affect on air quality and congestion. The TCMs included in CAAP, and others developed by a committee, will be folded into a comprehensive Trip Reduction Ordinance (TRO). The TRO will attempt to reduce VMT associated with the commute to work and school, shopping, and recreational trips. The TCMs in CAAP include the following strategies:

- Public awareness campaign;
- Trip Reduction Ordinance;
- Expanded and improved public transportation;
- Alternate work schedules;
- Rideshare matching and assistance;
- Telecommuting and teleconferencing measures; and
- Preferential treatment for transit and car pool/van pools.

Land use decisions must be made to help facilitate the use of alternative transportation. Careful land use planning, coupled with the improvements listed above, will increase the number of options available to the general public.

TRANSPORTATION SYSTEMS MANAGEMENT (TSM)

Transportation System Management (TSM) is the use of techniques to manage traffic circulation to maximize existing facilities and provide for effective planning of new facilities.

TSM techniques are intended to provide an economical, short-term improvement to increase efficiency and reduce congestion. Techniques can include improvements such as increasing the number of buses and routes, improving transit shelters, improvements to traffic signals, installation of exclusive turn lanes, installation of acceleration/deceleration lanes, resurfacing and widening of roads, and bike lanes on new or existing roads. TSM measures, when combined with the longer range objectives of Congestion Management Programs (CMPs), also conserve energy and decrease vehicular emissions leading to cleaner air.

TSM and TDM share some attributes the most notable being the employer sponsored trip reduction programs. An employer can accommodate certain transportation behaviors, such as flexible work schedules, and decrease peak hour demands on the circulation system. These employer based programs have developed Transportation Management Associations (TMAs).

TMAs are nonprofit public-private partnerships of government and private businesses working together to help solve local transportation and air quality problems. TMAs promote commuting options among employees of the members and assist employers and property owners in satisfying locally mandated trip reduction regulations.

NON-MOTORIZED TRANSPORTATION SYSTEM

With the exception of students commuting to school, bicycles, and other forms of non-motorized transportation have not been typically used as a transportation mode in El Dorado County. They have been primarily used for recreation. However, not only has recreational use increased in recent years but the popularity of the bicycle as an alternative mode of commuting is rising as well. The existing Bikeway Master Plan was developed in 1979 by a citizens Committee with input, support, and direction from the County Parks and Recreation Commission. The El Dorado County Board of Supervisors adopted the Bikeway Plan on March 11, 1980. The Hiking and Equestrian Trails Master Plan was adopted by the Board of Supervisors in April, 1989. The County is in the process of revising both plans.

The Non-Motorized Transportation Systems component (NMTS) provides the policies and practices which help to define the role of non-motorized transportation within El Dorado County. The NMTS defines a network of regional bikeways and trails which interface with and complement adjacent counties' and local (city) routes. The NMTS supports General Plan policies and covers both the incorporated and unincorporated areas of El Dorado County. Coordination of the Plan's development and implementation with the cities of El Dorado County is an important part of the process.

The Non-Motorized Transportation Systems component indicates the general location and classification of all existing and proposed officially adopted regional bikeways in El Dorado County.

AVIATION

There are four general aviation airports within the County. The Placerville Airport and the Georgetown Airport are both owned and operated by El Dorado County. Cameron Park Airport is a privately owned and operated facility, and the South Lake Tahoe Airport is owned and operated by the City of South Lake Tahoe.

The Placerville Airport is located on top of a ridge southeast of the City of Placerville, and Georgetown Airport is near the community of Georgetown. The purpose of this component is to describe the policies and practices that will guide the development of County airports as an integral function of the transportation network. The Placerville Airport has a master plan with a recommended 20 year capital improvement program. The Georgetown Airport development is being guided by an airport layout plan.

Both airports have been improved by FAA funded improvement projects. The airports are also used by the military and other government agencies for training flights, search and rescue missions, and fire suppression support. Both airports have plans to maximize aircraft basing areas. This includes tie downs, hangars, fueling, auto parking, and internal access/service roads.

Placerville Airport

The Placerville Airport is approximately 215.5 acres in size. The airport has one runway 4,200 feet in length and 75 feet wide. The runway is constructed of asphaltic concrete. The effective gradient of the runway is 0.15 percent, with a pavement strength of approximately 32,000 pounds per single wheel landing gear. The runway has medium intensity runway lights and is classified as a visual runway only; however, the runway is marked with non-precision approach markings. A full parallel taxiway to the runway connects five exit taxiways (four right angle and one 45 degree angle exit taxiway directly accessing the parallel taxiway). Several taxi lanes provide aircraft apron and hangar area ingress and egress.

The terminal area is located on the northwestern edge of the airport property. The terminal area facilities consist of aircraft parking aprons, aircraft hangars, airport administration building, and miscellaneous maintenance and support facility buildings. Located on the northeast corner of the airfield is a California Division of Forestry Helitac base which is currently inoperative.

Georgetown Airport

The Georgetown Airport has a single runway approximately 3,000 feet in length and 60 feet wide with lighted approaches at each end. The airport has zoning in place that includes industrial, commercial, and recreation areas. The airport is home base primarily for private single-engine planes. The hangar area has been recently constructed as have the taxiways. There are three fixed base operation hangars available at the airport. There is a picnic area/campground adjacent to the airport. The airport is used by local and out-of-area pilots for a variety of business, personal, and recreation related uses. There are tie downs, hangars, fuel, and repair services available at this facility.

MAINTENANCE

Maintenance of all transportation resources is a necessity if the County is going to provide safe and efficient transportation options in the future. The largest component of the transportation system, the County's Maintained Mileage Road System, will require the dominant share of investment dollars. The County's Maintained Mileage Road System is valued at approximately \$750,000,000. If this vital element of El Dorado County's infrastructure is not adequately maintained, the negative consequences will be far reaching. Traditional gas tax revenues are not sufficient to provide adequate funding. Among a large list of options to provide increased revenue are:

- Additional fuel or sales tax;
- Utility tax;
- County-wide parcel fee;
- Assessment Districts;
- Transfer tax;
- Value added tax; and
- Higher motor vehicle registration or license fees.

In addition to maintaining the County roads, there is also a need to provide for the maintenance of equipment and rolling stock.

The maintenance efforts should be guided by the Pavement Management System (PMS). The Board of Supervisors and the Local Transportation Commission will explore these funding options while allocating scarce existing resources.

REGIONAL AND LOCAL TRAFFIC FORECAST INFORMATION

In February of 1989, the engineering firm of DKS Associates delivered to the Department of Transportation the completed El Dorado County West Slope Traffic Model and the users manual for the model. Omni-Means was a subcontractor to Sedway-Cooke tasked with updating the traffic model in August of 1989. Base year and project description runs were done for the Conceptual Schematic Land Use Plan prepared in August 1992 by Sedway-Cooke Associates version of the General Plan.

The Department of Transportation is now revising the West Slope model for this update of the El Dorado County General Plan. The Traffic Analysis Zones (TAZs) have been redrawn to conform to census block boundaries. This census based TAZ structure will allow the model to download census information for the base year input. The database for the model will also incorporate the parcel-by-parcel inventory being conducted by the County. Studies regarding projections of traffic on roads exiting the County can be used for the calibration process.

The Department of Transportation West Slope model will also incorporate portions of the Caltrans modeling done by Barton-Aschman Associates, Inc., for the Central Urban Corridor (U.S. Highway 50 through Placerville) project. The Barton-Aschman model had an excellent correlation within the City of Placerville and will be a good comparison for the Placerville portion of the County's model.

Other recent traffic modeling work involving the West Slope of El Dorado County includes the Metro Study by the Sacramento Area Council of Governments (SACOG). This model covered Sacramento County plus parts of El Dorado, Placer, and Yolo counties. It covered El Dorado County near and west of Placerville with a low level of detail.

All three models, SACOG, Caltrans, and the County, have used the census information as their database. This will give the models a better probability of correlation. The correlation of the models is vital for the air quality conformity analysis that will need to be completed for infrastructure improvements within the County.

The traffic model will be used to determine the capacity of the roads impacted by the General Plan. The capacity will be determined using a modified *Highway Capacity Manual* methodology, (see previous discussion). Assumptions for several of these factors used in the calculation of capacity were made. These assumptions include:

- The critical period for analysis is the peak weekday hour between 4:00 p.m. and 6:00 p.m.;
- Ten percent of daily traffic occurs within this evening peak hour, during which traffic flow is directionally split 60 percent one way, 40 percent the other way;
- Terrain is predominantly rolling;
- Passing is estimated to be five percent of all roadway length;
- Trucks comprise five percent of all traffic (including RVs); and
- The implicit assumption is that rural roads have at least a 50 mph design speed which the HCM treats as a default. Many County roads fall short of this design capability, however. The effect of accounting for lower design speeds, all else kept equal, would be better computed levels of service even though travel would be slower. This is because passing is easier at lower speeds, and, therefore, "percent-time delay" is less. The HCM offers no suggestions to account for the possibility that slower, winding roads may have more no-passing zones which would be detrimental to their levels of service.

It is not practical within the scope of this study to measure all this information for each County road because of the cost of data collection and analysis and the difficulty of projecting such detailed traffic characteristics for the future General Plan analysis. The assumptions made here are intended to represent average and most frequent conditions although it is acknowledged that they vary considerably throughout the County.

IMPLEMENTATION OF THE CIRCULATION ELEMENT

Regional Highway System Consistency Concept

Consistency with the RHS is essential to the integrity of a functional regional highway network. Each jurisdiction within the County should be encouraged to adopt similar standards and assumptions to aid in the implementation of the same base transportation network.

Streets which serve predominantly as local collectors are generally not shown on the County RHS because they do not contribute materially to regional circulation. Such roads may, however, be locally significant and, therefore, may be reflected in the Regional Transportation Plan or within a County's or City's Circulation Element.

Regional highways are shown on the RHS map in the following two forms:

- Established alignments depicted by solid lines on the map, including existing highways where the centerline is the precise centerline, and future highways where the Board of Supervisors, a City Council, or the subdivision process has established a precise alignment; and,
- Conceptually proposed alignments defined by intermittent lines indicating future facilities whose precise alignment has not yet been determined.

Six-Lane Suburban Divided Highway

A Six-Lane Suburban Divided Highway is a six-lane divided roadway with a typical right-of-way width of 130 feet and a roadway width from curb to curb, including a 16 foot median, of 108 feet. A Six-Lane Suburban Divided Highway is designed to accommodate between 30,000 and 45,000 vehicle trips per day at Level of Service C. Six-Lane Suburban Divided Highways carry a large volume of regional through traffic not handled by the freeway system.

Six-Lane Suburban Divided Highways have fully controlled access with restricted private property access and public road approaches. Ideally, public access points along these highways should be placed at least one-half mile apart, centerline to centerline; and every effort shall be made to achieve this spacing. However, in recognition of special circumstances such as topography and existing public roadways, the County may allow spacing of public access points at less than one-half mile intervals along a Six-Lane Suburban Divided Highway if such reduced spacing is in the public interest. Under no conditions shall spacing between adjacent public

access points be less than 500 feet, centerline to centerline, unless the Board of Supervisors grants a waiver of the requirement. Waiver of the requirement will be outlined in the Design and Improvement Standards Manual (DISM).

The standard intersection for a Six-Lane Suburban Divided Highway consists of three through lanes in each direction, one left turn lane, and a free right turn lane. In review and approval of discretionary applications, the objective shall be to reserve adequate right-of-way to permit future implementation of this standard intersection. Should enhancements to the standard intersection be required, through the preparation of a traffic study, appropriate right-of-way and improvements as identified will supersede the standard intersection minimum.

Four-Lane Suburban Divided Highway

A Four-Lane Suburban Divided Highway is a four-lane divided roadway, with a typical right-of-way width of 100 feet and a roadway width from curb to curb, including a 16-foot median, of 84 feet. A Four-Lane Suburban Divided Highway is designed to accommodate between 20,000 and 30,000 vehicle trips per day at LOS C. A Four-Lane Suburban Divided Highway's function is similar to that of a Six-Lane Suburban Divided Highway. The principal difference is capacity.

Four-Lane Suburban Divided Highways have fully controlled access with limited private property access and public road approaches. Ideally, public access points along these highways should be placed at least one-half mile apart, centerline to centerline; and every effort shall be made to achieve this spacing. However, in recognition of special circumstances such as topography and existing public roadways, the County may allow spacing of public access points at less than one-half mile intervals along a Four-Lane Suburban Divided Highway if such reduced spacing is in the public interest. Under no conditions shall spacing between adjacent public access points be less than 500 feet, centerline to centerline, unless the Board of Supervisors grants a waiver of this requirement. Waiver of the requirement will be outlined in DISM.

The standard intersection for a Four-Lane Suburban Divided Highway consists of two through lanes, one left turn lane, and a free right turn lane. In review and approval of discretionary applications, the objective is to reserve adequate right-of-way to permit future implementation of this standard intersection. Should enhancements to the standard intersection be required, through the preparation of a traffic study, appropriate right-of-way and improvements as identified will supersede this standard intersection minimum.

Four-Lane Suburban Undivided Highway

A Four-Lane Suburban Undivided Highway is a four-lane roadway with a typical right-of-way width of 80 feet and a roadway width from curb to curb of 64 feet. A Four-Lane Suburban Undivided Highway is designed to accommodate between 10,000 and 20,000 vehicle trips per day at LOS C. A Four-Lane Suburban Undivided Highway's function is similar to that of a Four-Lane Suburban Divided Highway. The principal difference is capacity.

Four-Lane Suburban Undivided Highways have fully controlled access with limited private property access and public road approaches. Ideally, public access points along these highways should be placed at least one-half mile apart, centerline to centerline, and every effort shall be made to achieve this spacing. However, in recognition of special circumstances, such as topography and existing public roadways, the County may allow spacing of public access points at less than one-half mile intervals along a Four-Lane Suburban Undivided Highway if such reduced spacing is in the public interest. Under no conditions shall spacing between adjacent public access points be less than 500 feet, centerline to centerline, unless the Board of Supervisors grants a waiver of this requirement. Waiver of the requirement will be outlined in the DISM.

The standard intersection for a Four-Lane Suburban Undivided Highway consist of two through lanes and one left turn lane. In review and approval of discretionary applications, the objective shall be to reserve adequate right-of-way to permit future implementation of this standard intersection. Should enhancements to the standard intersection be required, through the preparation of a traffic study, appropriate right-of-way and improvements as identified will supersede this standard intersection minimum.

Two-Lane Suburban Highway

A Two-Lane Suburban Highway is a two-lane undivided roadway with a typical right-of-way width of 60 feet and a roadway width from curb to curb of 40 feet. Two-Lane Suburban Highways are provided to accommodate up to 10,000 vehicle trips per day at LOS C. By strict definition, such a facility is not a highway; it functions primarily as a collector facility. It differs from a local collector street in its ability to handle through traffic movements between two highways. It is shown on the RHS because it provides network continuity or may serve through traffic demand where projected volumes do not warrant a four-lane highway. As such, it is shown on the RHS only when it is of regional significance.

Two-Lane Suburban Highways have fully controlled access with limited private property access and public road approaches. Ideally, public access points along these highways should be placed at least one-quarter mile apart, centerline to centerline, and every effort shall be made to achieve this spacing. However, in recognition of special circumstances such as topography and existing public roadways, the County may allow spacing of public access points at less than one-quarter mile intervals along a Two-Lane Suburban Highway if such reduced spacing is in the public interest. Under no condition shall spacing between adjacent public access points be less than 500 feet, centerline to centerline, unless the Board of Supervisors grants a waiver of this requirement. Waiver of the requirement will be outlined in the DISM.

Four-Lane Rural Highway

A Four-Lane Rural Highway is a four-lane roadway with a typical right-of-way width of 80 feet, and a roadway width of 64 feet. Such a roadway is designed to accommodate between 10,000 and 20,000 vehicle trips per day at Level of Service C. A Four-Lane Rural Highway serves as a collector, distributing traffic between local streets and the County's arterials. Although some of these roadways serve as through routes, most provide more direct access to surrounding land uses than equivalent suburban highways.

Four-Lane Rural Highways have fully controlled access but may have private access points for single and multi-family residential, commercial, office, and industrial developments in addition to public road approaches. Ideally, public access points along a Four-Lane Rural Highway should be at least one-half-mile apart, centerline to centerline, and every effort shall be made to achieve this spacing. However, in recognition of special circumstances such as topography and existing public roadways, the County may allow spacing of public access points at less than one-half mile intervals along Four-Lane Rural Highways if such reduced spacing is in the public interest. Under no conditions shall spacing between adjacent public access points be less than 500 feet, centerline to centerline, unless the Board of Supervisors grants a waiver of this requirement. Waiver of the requirement will be outlined in the DISM.

Private access points along a Four-Lane Rural Highway should be kept to the minimum necessary to provide reasonable access to the adjacent land uses. Access points should be located at the property lines so that a single access will serve two parcels. No parcel should have more than one access point on a given Four-Lane Rural Highway. A corner lot at the intersection of two rural highways may have an access point on each roadway. No private access point on a rural highway shall be closer than 150 feet from any public intersection, measured from the centerline of the private access point to the projected curb or shoulder line of an intersecting road. Distances between adjacent private access points along a rural highway should not be less than 200 feet from centerline to centerline of access points. Deviations from private access control criteria for Four-Lane Rural Highways may only be granted by the Board of Supervisors.

The standard intersection for a Four-Lane Rural Highway shall consist of two through lanes and one left turn lane. In review and approval of subdivisions, the objective shall be to reserve adequate right-of-way to permit future implementation of this standard intersection. Should enhancements to the standard intersection be required, through the preparation of a traffic study, appropriate right-of-way and improvements as identified will supersede this standard intersection minimum.

Two-Lane Rural Highway

A Two-Lane Rural Highway is a two-lane undivided roadway with a typical right-of-way width of 60 feet and a roadway width from curb to curb of 40 feet. Two-Lane Rural Highways are provided to accommodate up to 10,000 vehicle trips per day at LOS C. By strict definition, such a facility is not a highway. It functions primarily as a collector facility to serve rural areas. It differs from a local collector street in its ability to handle through traffic movements between two highways. It is shown on the RHS because it provides network continuity or may serve through traffic demand where projected volumes do not warrant a four-lane rural highway. As such, it is shown on the RHS only when it is of regional significance.

Private access points along a Two-Lane Rural Highway should be kept to the minimum necessary, to provide reasonable access to the adjacent land uses. Access points should be located at the property lines so that a single access will serve two parcels. No parcel should have more than one access point on a given Two-Lane Rural Highway. A corner lot at the intersection of two rural highways may have an access point on each roadway. No private access on a rural highway shall be closer than 150 feet from any public intersection, measured from the centerline of the private access point to the projected curb or shoulder line of an intersecting road. Distances between adjacent private access points along a rural highway should not be less than 200 feet from centerline to centerline of access points. Deviations from private access control criteria for Two-Lane Rural Highways may only be granted by the Board of Supervisors.

Local Roads

Local roads primarily provide service to the adjacent land uses. The access requirements for local roads are to provide for the safety of the public by proper location of access points and will be in accordance with the Department of Transportation encroachment permit policies and regulations.

Roadway Cross-Sections

In order to provide safe, efficient roadways all suburban highways and rural highways should incorporate the following cross sectional roadway features as applicable:

Traveled ways are the main portion of the roadway with the "lanes" intended for traffic movement. All lanes in the through traveled way for suburban and rural highways shall be 12 feet wide. Turning lanes should be 12 feet wide but may be reduced to ten feet wide should topographical or right-of-way constraints so dictate. All traveled ways on suburban highways and rural highways shall be paved.

Bike Lanes or shoulders shall be provided along all suburban and rural highways to separate bicycle traffic from motorized traffic on these roadways. Shoulders shall be paved. Shoulder areas to the right of traffic may be striped and signed as "Bike Lanes" provided the shoulder is at least six feet wide. The California Vehicle Code provides that if a shoulder is available, bicyclists must use the shoulder in lieu of the traveled way. Four foot wide shoulders provide adequate room for this application but should not be officially designated "Bike Lanes." Bikeways, Hiking, and Equestrian trails are further discussed in the "Non-Motorized Transportation Systems Component" discussed later in this Circulation Element.

Medians or center dividers are required on certain suburban highways. Median width is the distance between left edges of opposing through traveled ways. The minimum median width shall provide for a 16 foot curbed physical divider between intersections as shown in Figures 3-4 and 3-5. At intersections, the curbed divider will be as shown in Figures 3-4 and 3-5. At intersections, the curbed divider will be reduced to four feet the minimum allowable pedestrian safety refuge, so as to allow for a left turn lane in the median. Medians may be less than 16 feet wide between intersections provided an approved vertical barrier is used to separate opposing traffic. When vertical barriers are used, a minimum six-foot left shoulder area shall be provided between the base of the barrier and the adjacent edge of the through traveled way.

Edges of medians need not be at the same elevation. In rolling or mountainous terrain, design of divided roads with independent grade lines is encouraged to minimize earthwork. In such cases, the slope, across the median between adjacent edges of the through traveled way, should not exceed two units horizontal to one unit vertical (2:1).

Where medians are 20 feet wide or wider, four-foot wide left shoulders may be used in lieu of curbs. However, at intersections where left turn lanes reduce the width of the physical divider, curbs shall be used to maintain median integrity.

Sidewalks and curbs shall be provided in residential subdivisions, including land divisions created through the parcel map process, where any lot or parcel size is one-half acre or less. Sidewalks in these areas shall be a minimum of four feet away from the face of curb. Curbs should be six inches high, essentially vertical, with the face sloped away from the roadway at not greater than one unit horizontal to three units vertical (1:3).

In commercial or industrial subdivisions, curbs and sidewalks will be required on all RHS roadways. Streets adjacent to schools shall have curbs and sidewalks. Sidewalks in commercial and industrial areas and adjacent to schools shall not be less than eight feet wide.

The typical sections depicted on the RHS legend are simplified diagrams based upon El Dorado County Standard Plans. Notwithstanding these highway specifications, additional right-of-way may be required for any classification when a highway coincides with an adopted route for an additional public facility (e.g., transit facilities, bikeways, or riding and hiking trails), or a scenic highway.

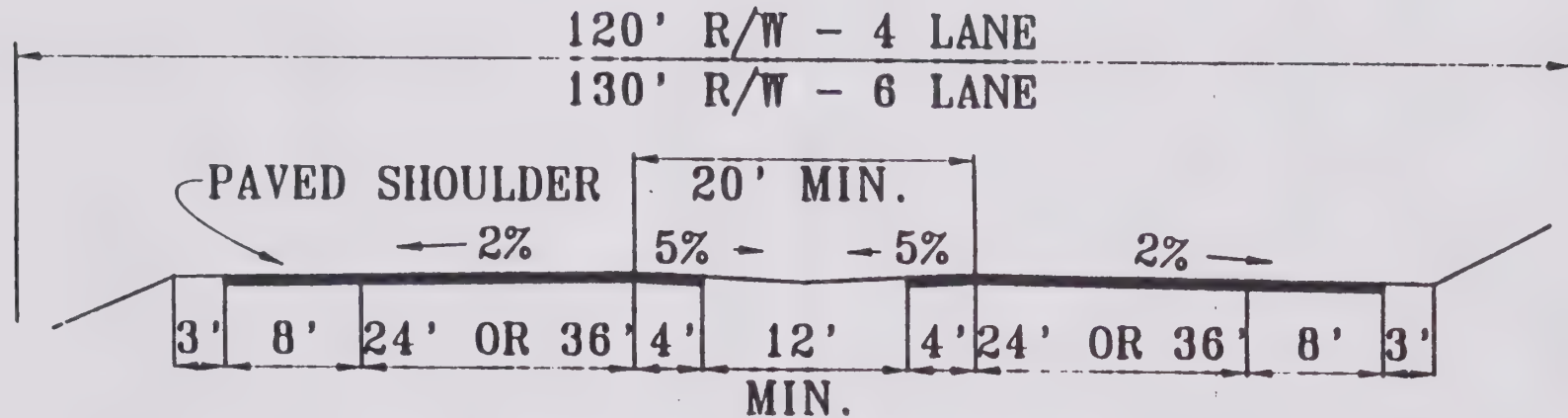
Implementation

Mitigating exactions required by these policies shall be obtained from the project proponent at the time of discretionary actions. If no such map is to be filed, the exactions shall be obtained as part of the building permit process.

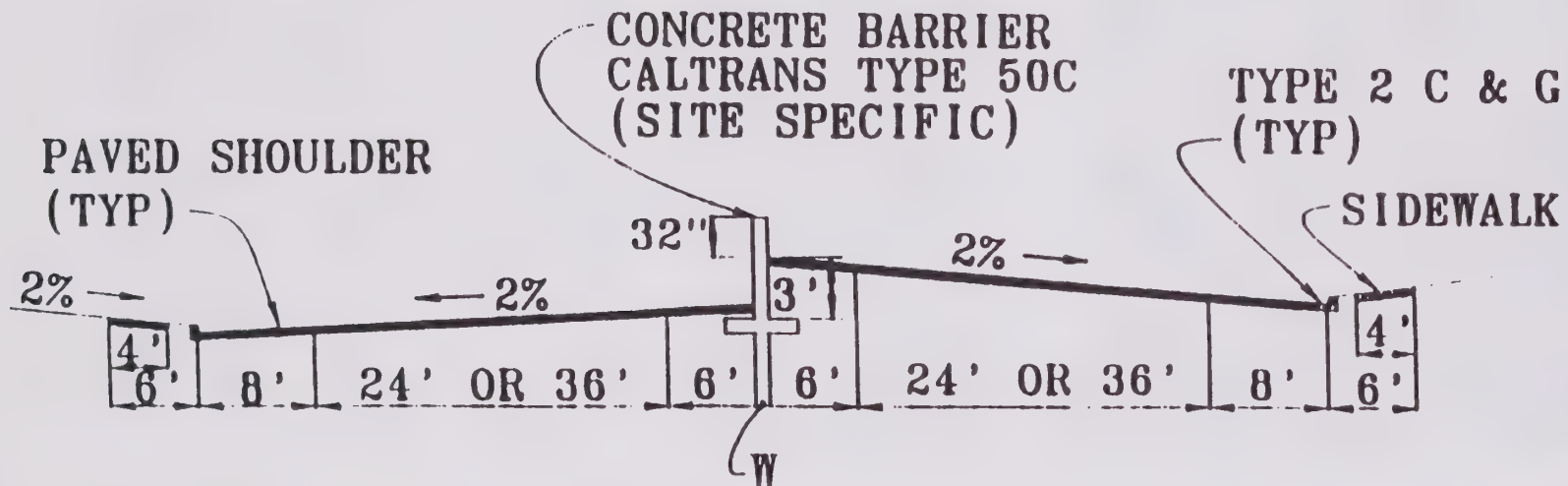
Right-of-way shall be dedicated to the County by the project proponent for that portion of the designated future right-of-way lying within the boundaries of the parcel upon which development is to occur. If it is determined that, due to the level terrain, less than the indicated right-of-way is needed for multi-lane road improvements, the County may adjust the right-of-way limits accordingly. Where there is an existing road and the County has determined that the future road centerline will coincide with the existing centerline, half of the total right-of-way will be on each side of the existing centerline. Where the County has determined the existing road centerline does not have adequate geometric features for future traffic, the County will establish the future centerline and half of the total right-of-way will lie on each side of the future centerline. In all situations, the dedication of property for future rights-of-way will include restrictions on access to those future roads. The County will then allow access points consistent with established policies.

Improvements required by established policies are the responsibility of the project proponent unless the County determines otherwise. Where there is an existing paved road, the project proponent will construct all future improvements required by these policies. Where the existing road is not paved (gravel or chip seal), all required improvements shall be constructed from the future centerline to the future right-of-way line on the developing parcel. If any such improvements are included in the cost of roadway improvements in an established road development fee, credits or reimbursements will be considered to the extent of the proportion of estimated costs the improvements bear to the total estimated costs of improvements used to establish the road improvement fee schedule.

UNCURBED DIVIDED ROADWAY

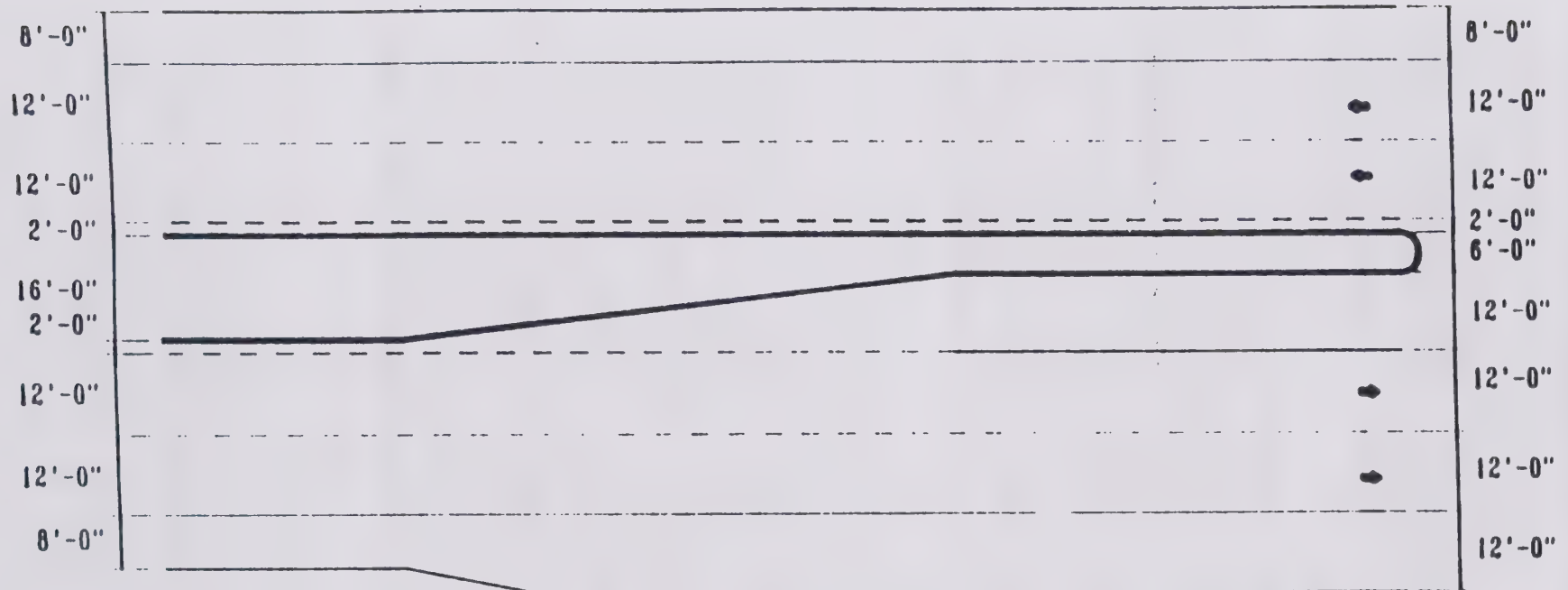


TYPICAL VERTICAL BARRIER SECTION ON DIVIDED ROAD

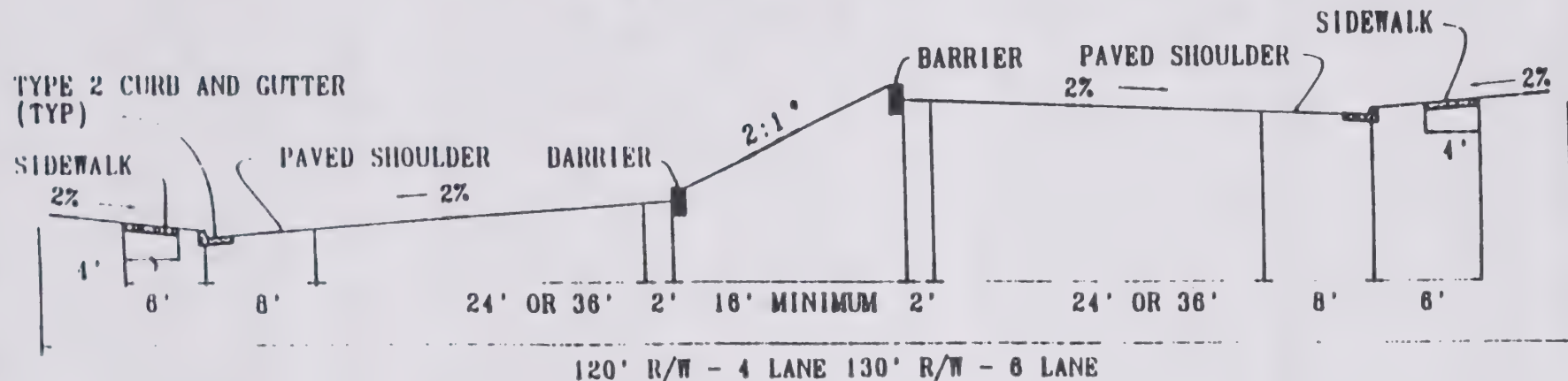


NOTE: W = MAXIMUM WIDTH OF BARRIER

TYPICAL DIVIDED ROAD



TYPICAL INDEPENDENT ROADWAY with SLOPED MEDIAN



• SLOPE SHALL NOT BE STEEPER THAN 2:1

FIGURE 3-5

NON-MOTORIZED TRANSPORTATION SYSTEMS

CONCEPT CONSISTENCY

The *Caltrans Highway Design Manual* can be referenced for clarification and specific detail on design speeds, signing, striping and other related design issues. Additional information can be found in the County's adopted Standard Plans. Laws pertaining to the use of bicycles and trail facilities can be found in the Vehicle Code of the State of California. Following is a description of the characteristics of Class I, II, and III bikeways:

Class I Bikeway (Bicycle Trail)

A Class I bicycle trail is a facility which is physically separated from a roadway and designated primarily for the use of bicycles (See Figure 3-6). Cross flows by pedestrians and motorists are to be minimized. Bicycle trails typically serve corridors not served by streets and highways or where sufficient right-of-way exists to construct a separate facility parallel to the roadway. They can provide both recreational and commuter opportunities. These facilities can often serve to bridge gaps in the system caused by man-made or natural barriers. They often utilize abandoned railroad rights-of-way, utility easements, flood control channels, parks, and similar linear open space corridors.

Class II Bikeway (Bicycle Lane)

A Class II bicycle lane is a facility featuring a striped lane on the paved area of a road for preferential use by bicycles (See Figure 3-7). It is located along the edge of the paved area outside the motor vehicle travel lanes and shall be restricted to parking. Where sufficient pavement width exists, it may be located between a parking lane and the outside motor vehicle travel lane. On highways in the County's unincorporated areas where a Class II trail is designated on the NMTS, parking shall be prohibited where insufficient width exists to accommodate both parking and bicycle lanes in addition to the required number of vehicular travel lanes. A bike lane serves to differentiate the right-of-way assigned to bicyclists and motorists and provides for more predictable movements by each. A bike lane is typically identified by black and white "Bike Lane" signs (Sign type "R81", State of California Uniform Sign Chart), special lane striping, and may have "Bike Lane" stencils on the pavement. Bike lanes are one-way facilities intended to be ridden in the same direction as adjacent motor vehicle flow.

Class III (Bicycle Route)

A Class III bicycle route is a facility typically identified by green and white (Type "G93") "Bike Route" guide signing only. There usually are no special lane designations, and parking may be permitted. Bicycle traffic may share the roadway with motor vehicles; however, bicycle usage is considered secondary. Bike routes are established as a means to connect otherwise discontinuous segments of Class I or Class II bikeways.

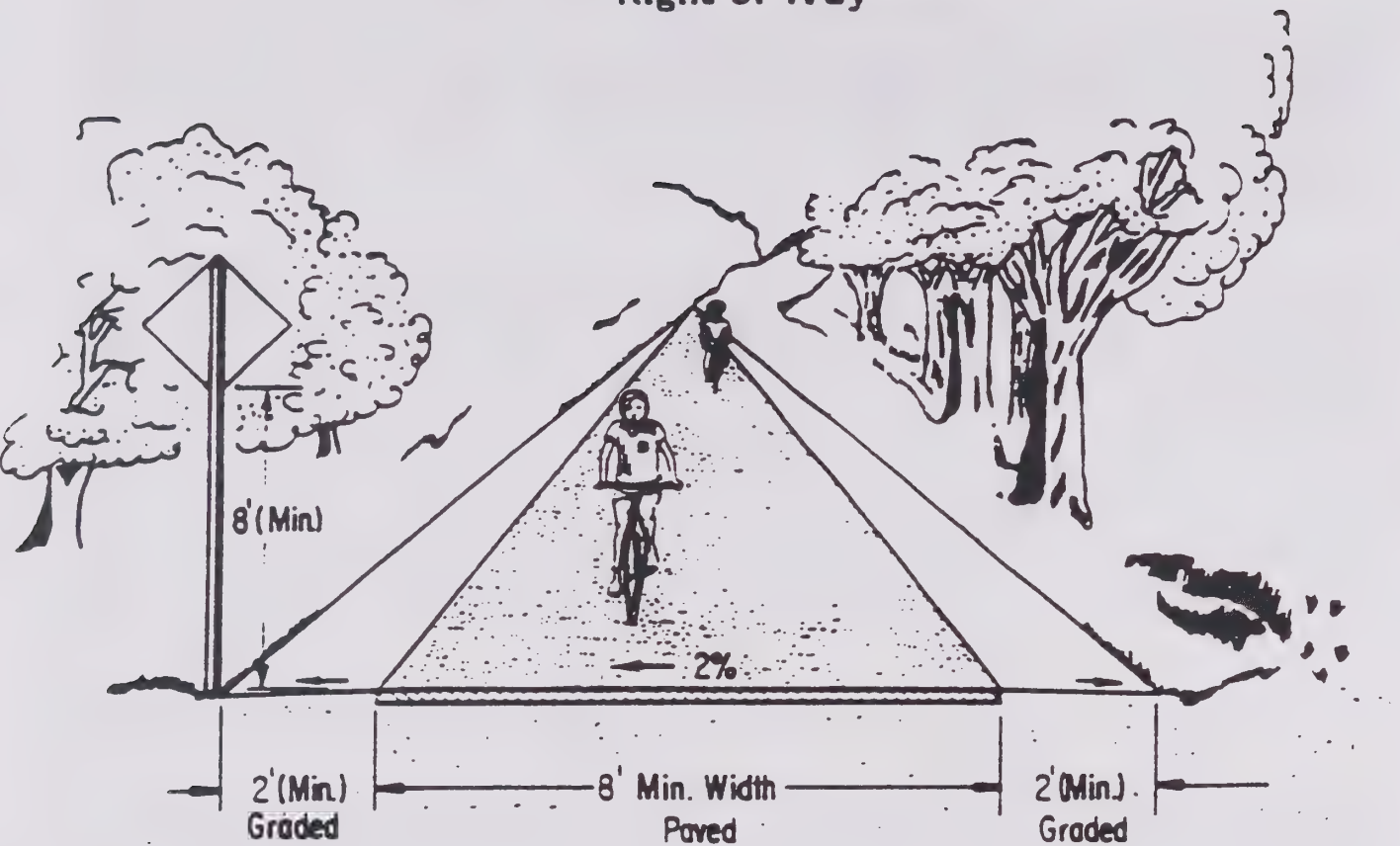
Hiking and Equestrian Trails

Hiking and Equestrian Trails shall be separated from the travel roadway whenever possible by curbs and barriers (such as fences or rails), landscape buffering, and spacial distance. Existing public corridors such as power transmission line easements, railroad rights-of-way, irrigation district easements, and roadways shall be put to multiple use for trails, where possible.

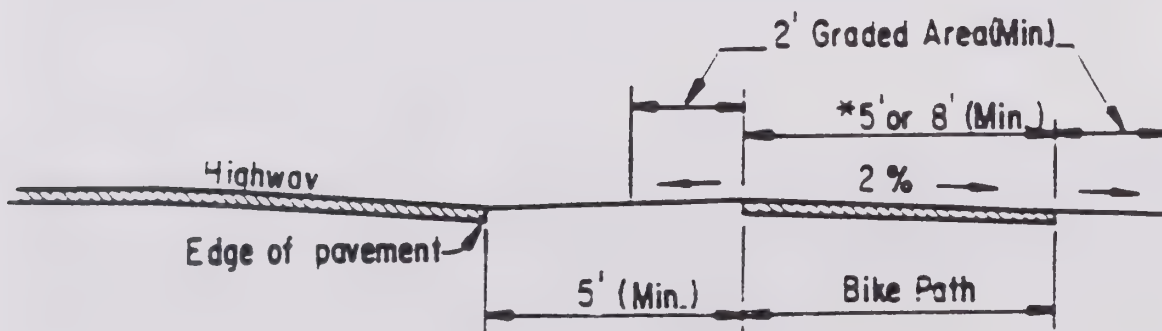
Undetermined

A bikeway and/or hiking and equestrian route designated on the NMTS map as "Undetermined" indicates that the ultimate trail category or classification, and/or its alignment, has not yet been determined or officially adopted due to topographical or right-of-way constraints or other considerations.

FIGURE 3-6
Two-way Bike Path on Separate
Right of Way



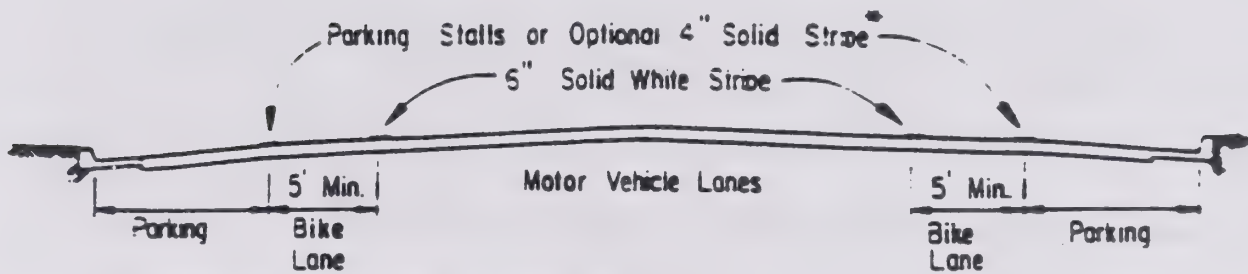
**Typical Cross Section of Bike
Path Along Highway**



*One-Way: 5' Minimum Width
Two-Way: 8' Minimum Width

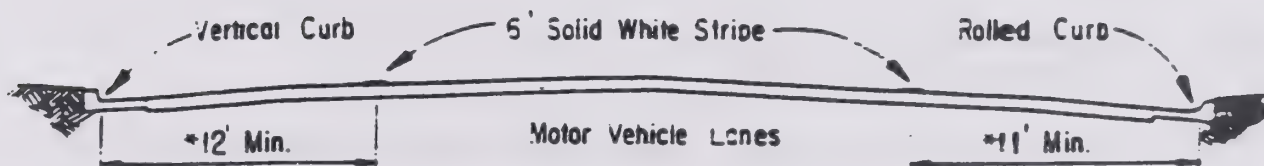
FIGURE 3-7

Typical Bike Lane Cross Sections (On 2-lane or Multilane Highways)



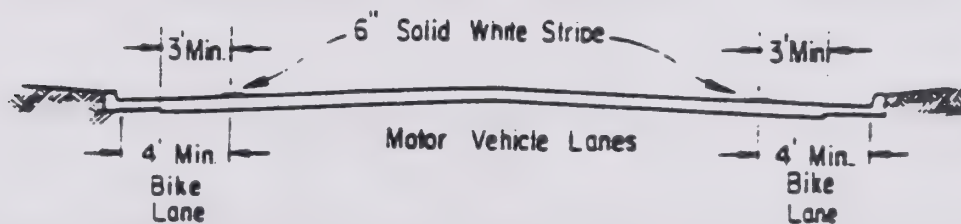
* The optional solid white stripe may be advisable where stalls are unnecessary (because parking is light) but there is concern that motorists may misconstrue the bike lane to be a traffic lane.

(1) STRIPED PARKING

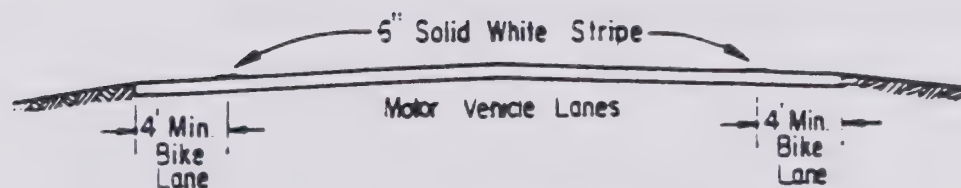


* 13' is recommended where there is substantial parking or turnover of parked cars is high (e.g. commercial areas).

(2) PARKING PERMITTED WITHOUT
PARKING STRIPE OR STALL



(3) PARKING PROHIBITED



(4) TYPICAL ROADWAY
IN OUTLYING AREAS
PARKING RESTRICTED

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Chapter 4

HOUSING

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Chapter 4

HOUSING

INTRODUCTION AND PURPOSE

State Policy and Authorization

In 1967, the State Legislature revised State Planning and Zoning Law to require all jurisdictions to adopt a Housing Element as part of their General Plan. This requirement was in recognition of a growing concern for provision of adequate housing for all California residents. The State Department of Housing and Community Development (HCD) is charged with developing regulations for implementing housing law and certifying Housing Elements for compliance with State law. In 1980, the State Legislature added Sections 65580 through 65590 to the Government Code setting forth State policy and specific provisions detailing housing element contents.

Housing elements are required to be revised at least every five years. El Dorado County's Housing Element was last revised in 1992. The Element has again been revised as part of the County's General Plan update.

The Housing Element is to act as a statement of local policy intended to address the following findings made by the State Legislature:

1. The availability of housing is of vital Statewide importance, and the early attainment of decent housing and a suitable living environment for every California family is a priority of the highest order.
2. The early attainment of this goal requires the cooperative participation of government and the private sector in an effort to expand opportunities and accommodate the housing needs of Californians of all economic levels.
3. The provision of housing affordable to low and moderate income households requires the cooperation of all levels of government.
4. Local and State governments have a responsibility to use the powers vested in them to facilitate the improvement and development of housing to make adequate provisions for the housing needs of all economic segments of the community.

5. The Legislature recognizes that in carrying out this responsibility, each local government also has the responsibility to consider economic, environmental and fiscal factors, and community goals set forth in the General Plan, and to cooperate with other local governments and the State in addressing regional housing needs (Government Code Section 65580).

Organization of the Housing Element

Per Government Code Section 66583, the Element is to consist of four basic components:

1. An assessment of housing needs and an inventory of resources and constraints relevant to meeting these needs.
2. A statement of the community's goals, quantified objectives, and policies relative to the maintenance, preservation, improvement, and development of housing.
3. A program which sets forth a five-year schedule of actions the local government is undertaking or intends to undertake to implement the policies and achieve the goals and objectives of the Housing Element through the administration of land use and development controls, provision of regulatory concessions and incentives, and the utilization of appropriate Federal and State financing and subsidy programs when available.
4. An analysis and program for preserving assisted housing developments.

Consistency with General Plan

The Housing Element is adopted as one part of the El Dorado County General Plan. Its discussion of needs, constraints, goals, objectives, and programs for implementation pertain only to the unincorporated areas of the County. The Housing Element is divided into two separate sections. The goals, objectives, and proposed programs are all contained in Volume I of the General Plan. All of the background and support information, including existing conditions, projections, costs, constraints, etc., are included herein in Volume II. The cities of Placerville and South Lake Tahoe are required to adopt Housing Elements in their General Plans.

California State Planning Law requires the General Plan and elements thereof to comprise an integrated, internally consistent statement of objectives for the adopting agency (Government Code, Section 65300.5). The goals and objectives contained in the Housing Element are consistent with the other elements in the General Plan including Land Use, Circulation, Public Services and Utilities, Public Health and Safety, Conservation and Open Space, and Tahoe Basin.

Public Participation and Process

A significant amount of public participation occurred during the formulation of the 1992 revision of the Housing Element through the General Plan Workshops held over a two year period. In 1990, an "Affordable Housing Task Force" (AHTF) was formed to examine the affordability of the County's housing. The Task Force was comprised of twenty members (see Appendix C) who were selected based on their association with the development, real estate, and finance community, their role as advocates for affordable housing, or positions in local government. The Task Force retained the Rural California Housing Corporation (RCHC) to prepare the El Dorado County Affordable Housing Study which was completed in February of 1991.

County staff relied heavily on the data, findings, and recommendations contained within the Affordable Housing Study and utilized the AHTF as the housing committee for review of the revision of the Housing Element prepared in 1992. Copies were made available to interested individuals, groups, non-profit service providers, and affected local government agencies for review and comment. This chapter and the Volume I policies are an update of the adopted 1992 Element including revised statistical data where available and an analysis of programs in effect since the 1984 element.

GENERAL DEMOGRAPHICS AND EMPLOYMENT **CHARACTERISTICS**

Introduction

Population characteristics and employment trends necessary to assess the existing and projected housing needs for El Dorado County are discussed in this section providing a regional perspective on housing affordability issues affecting many County residents.

The statistical information available for analyzing population and employment characteristics has been gathered from a variety of sources. The most comprehensive data were obtained from the Federal Census conducted in 1990 and State Department of Finance records. Labor and employment data were gathered from the California Employment Development Department and an analysis prepared by the Sierra Economic Development District.

Regional Setting

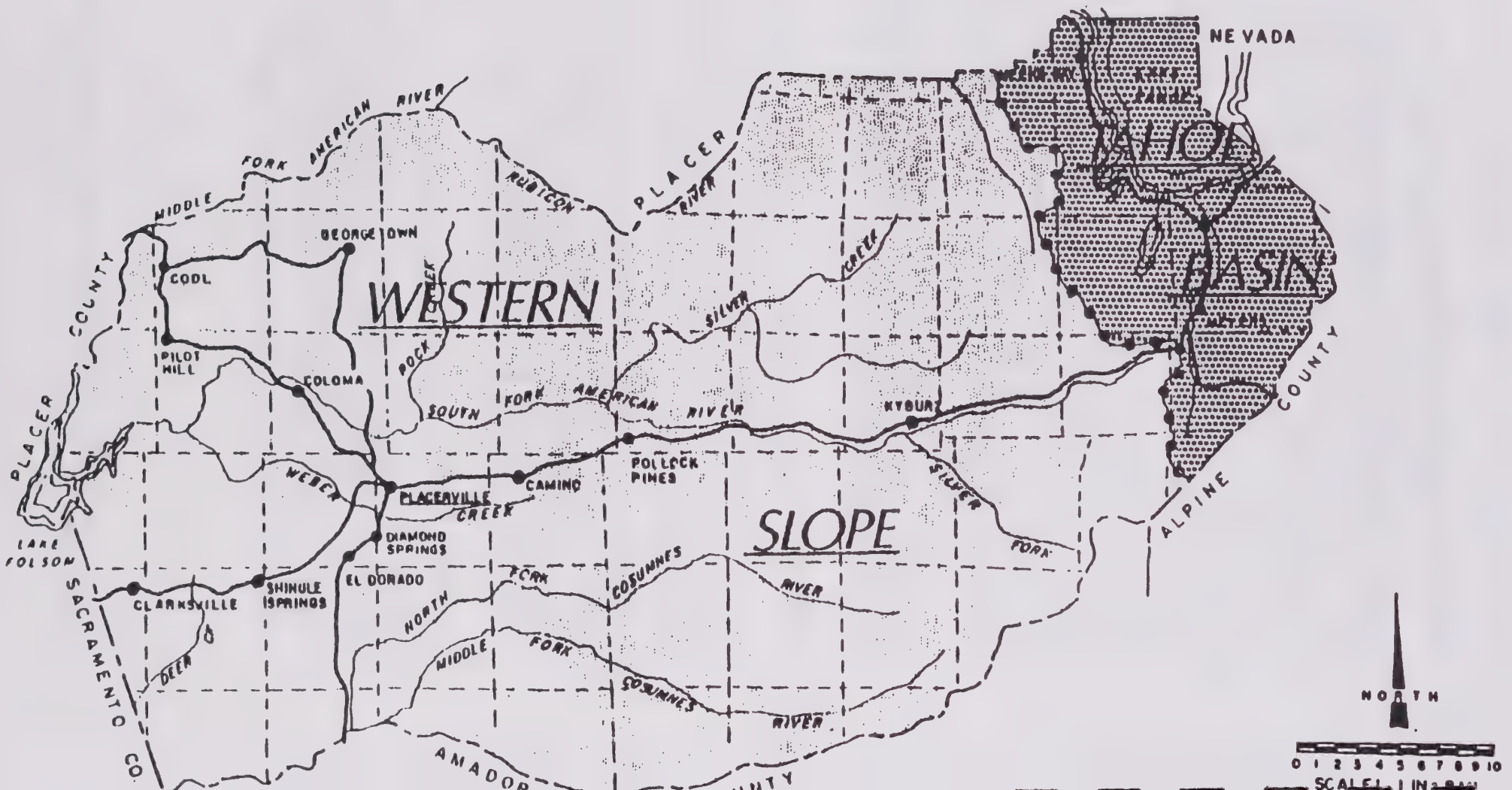
El Dorado County can be characterized as having two distinct regional housing market areas which are divided by the crest of the Sierra Nevada mountains (Figure 4-1). The East Slope of the Sierras encompasses the unincorporated portion of the County within the Tahoe Basin and the City of South Lake Tahoe. The West Slope encompasses the remainder of the unincorporated portion of the County and the City of Placerville.

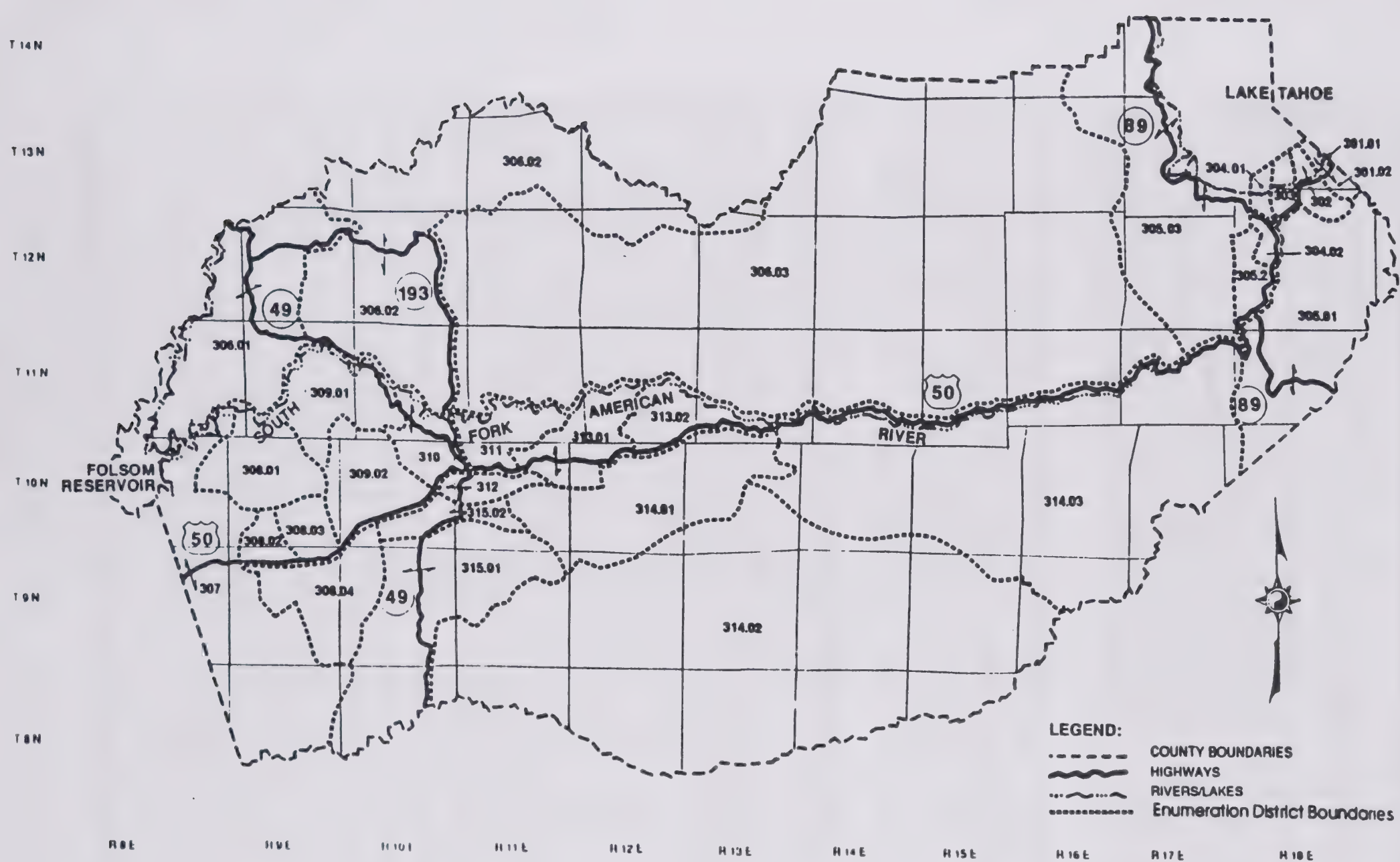
EL DORADO COUNTY

GENERAL PLAN

Figure 4-1

GREAT BASIN - PACIFIC WATERSHED DIVIDE





EL DORADO COUNTY

GENERAL PLAN

Figure 4-2
U.S. Census Tract Boundaries
1990

Population Characteristics

El Dorado County has been one of the fastest growing areas of California for the last twenty years, doubling in population between 1970 and 1980. Between 1980 and 1990, the population increased from just over 85,800 to 126,000. Information contained in *Population and Employment Forecast* (Economic and Planning Systems 1993) forecasts an annual growth rate of 2.85 percent for a population increase of 94,000 by 2010 for a projected total of 218,730. Population projections for the period 1990 to 2010 are shown in Table 4-1. Table 4-2 depicts population change by Census Tract between 1980 and 1990. As shown in Table 4-2, over this ten year period the most rapid growth has occurred in the western most portion of the County.

TABLE 4-1
PROJECTED HOUSEHOLD POPULATION 1990-2010

1990	1995	2000	2005	2010
124,730	144,881	168,712	191,982	218,730

Note: Projects do not include group quarters inhabitants. Following Tables 4-2 through 4-4 include the group quarter population in 1990 of 1,265 persons.

Source: California Department of Finance; Economic and Planning Systems

TABLE 4-2
POPULATION CHANGE 1980-1990

Total County by Census Tract				
Tract	1980	1990	% Change	% Population
301.01	582	495	-14.95	94.54
.02	3,014	3,800	26.08	.48
302	4,272	4,414	3.32	1.07
303	5,154	5,298	2.79	.21
304.01	4,028	3,875	-3.80	1.00
.02	3,673	3,890	5.91	.29
305.01	3,579	4,492	25.51	.32
.02	2,240	2,479	10.67	.13
.03	929	909	-2.15	1.96
*306	6,120	10,899	78.09	100.00
307	5,441	10,160	86.73	
*308	11,150	22,634	103.00	
*309	3,478	6,195	78.12	

310	3,925	4,766	21.43	
311	3,671	4,691	27.79	
312	3,685	4,648	26.13	
*313	5,879	7,302	24.20	
*314	6,762	12,596	86.28	
*315	8,212	12,452	51.63	
Total	85,794	125,995	46.86	

*Combined 1990 Census Tracts

Source: 1980 and 1990 U.S. Census

Age: Age composition trends for the County are illustrated in Table 4-3. These patterns generally reflect the State profiles, i.e., a large number of people in the middle age bracket and expanding numbers in the oldest and youngest age groups. The median age within the County is 35.3.

TABLE 4-3
MAJOR AGE GROUPS

Age Group	Male	Female	Total	Percent
0-9	9,965	9,497	19,462	15.5
10-19	8,579	7,937	16,516	13.1
20-29	7,226	7,201	14,427	11.4
30-44	17,884	17,853	35,737	28.3
45-59	9,658	9,438	19,096	15.2
60+	9,706	11,051	20,757	16.5
TOTAL	63,018	62,977	125,995	100.0

Source: 1990 U.S. Census

Ethnicity: According to 1990 Census figures, the residents of El Dorado County are predominantly white. Table 4-4 shows the ethnic composition of the County including the two incorporated cities. Although the total County population increased by almost 47 percent between 1980 and 1990, the rate increase for non-white races in most cases exceeded 100 percent.

**TABLE 4-4
PERSONS BY RACE 1980-1990**

Race	1980	1990	% Change	% of Population
White	82,400	119,118	44.56	94.54
Black	296	606	104.73	.48
Native American	739	1,351	82.81	1.07
Chinese	116	270	132.76	.21
Filipino	542	1,263	133.03	1.00
Japanese	149	361	142.28	.29
Other Asian	129	401	210.85	.32
Pacific Islander	75	161	114.67	.13
Other Race	1,366	2,464	80.38	1.96
Total County	85,812	125,995	46.83	100.00

Source: 1980 and 1990 U.S. Census

Income: The median family/household income by census tract is illustrated in Table 4-5. Median income County-wide is \$39,823 per year. The State Department of Housing and Community Development and the Sierra Planning Organization have estimated the percentage of households within each income group. The Housing Element programs reflect the needs of these income groups. A more complete discussion of the income levels is located in Appendix D, the Regional Housing Allocation Plan for Sierra Planning Organization.

**TABLE 4-5
MEDIAN INCOME BY CENSUS TRACT**

Census Tract	Household	Family
301.01	\$15,536	\$24,458
.02	\$21,113	\$23,068
302	\$27,289	\$30,149
303	\$27,610	\$29,962
304.01	\$30,567	\$33,152
.02	\$21,971	\$27,500

TABLE 4-5
MEDIAN INCOME BY CENSUS TRACT

Census Tract	Household	Family
305.01	\$39,485	\$42,107
.02	\$36,091	\$38,964
.03	\$33,603	\$37,500
306.01	\$45,417	\$46,204
.02	\$30,540	\$32,372
.03	\$29,833	\$31,875
307	\$57,558	\$59,540
308.01	\$47,276	\$55,743
.02	\$45,714	\$48,738
.03	\$41,000	\$44,875
.04	\$42,009	\$45,377
309.01	\$45,987	\$51,281
.02	\$46,175	\$48,531
310	\$26,641	\$32,345
311	\$23,766	\$27,771
312	\$31,957	\$39,400
313.01	\$26,587	\$41,250
.02	\$26,603	\$30,978
314.01	\$39,983	\$40,683
.02	\$27,552	\$30,328
.03	\$37,167	\$37,167
315.01	\$36,520	\$40,583
.02	\$29,048	\$37,683
Placerville	\$22,722	\$31,019
So. Lake Tahoe	\$25,596	\$28,727
El Dorado County	\$35,058	\$39,823
California	\$35,798	\$40,559

Source: 1990 U.S. Census

Labor Force Trends and Outlook: Job growth in El Dorado County has been slow during the period of 1991-93 due to the effects of the recession. Table 4-6 illustrates the annual averages of wage and salary employment. (Note: This data will be updated by the Employment Development Department and published in October of 1993). Analysis of this table and information supplied by Economic and Planning Systems (1993) reveals the following trends: In 1990 the most growth occurred in the construction/mining industries, where 400 jobs were added. This may have declined since 1990 due to significant declines in building activity. The construction industry is projected to grow through the 1990s at an average annual rate of 4.1 percent. Mining is expected to add approximately 363 new jobs in the next 20 years. A 6.7 percent increase (100 jobs) was realized in the finance, insurance, and real estate industries. Government (Federal/State/local) is currently the third largest employer in the County with a 3 percent increase during the period 1989 to 1990. Due to layoffs and an overall reduction in positions, the local government work force will decrease in 1993. However, an annual growth rate of 2.7 percent is projected for all government sector jobs."

The service industry is projected to create the greatest number of jobs during the next several years but remained static during 1989-90. This was due to the drought having a detrimental effect on tourism in the South Lake Tahoe area, causing a decrease in employment at hotel, resort, and entertainment sites. An annual growth rate of 4.7 percent is projected for the next 20 years.

Manufacturing jobs had an overall increase of 5 percent; however, all the job growth was in the nondurable goods category which includes food processing and the printing/publishing businesses. The durable goods sector, including lumber and wood manufacturing and electronic components, produced no growth during this period. However, the annual average growth rate is projected to be 4.9 percent.

The retail trade sector, which employs the greatest number of people in the County, maintained a steady increase adding 200 jobs. A growth rate of 3.8 percent is projected, however, most of these jobs are seasonal and/or part-time. Wholesale trade employment remained dormant although a 3.7 percent annual average growth rate is projected. Agriculture, forestry, and fishing declined by one-third or 100 jobs. No growth is projected.

Projections: El Dorado County has traditionally been considered a bedroom community for Sacramento County and the Roseville/Rocklin area of Placer County. This is confirmed by the current jobs/housing ratio of less than 0.5; the fact that one-third of the labor force is employed outside of the County; and the small amount of employment in the manufacturing and wholesale trade sectors.

The number of jobs will continue to grow with the population. However, unless more jobs of the higher paying manufacturing and professional type are brought into the County, El Dorado County will remain a suburban/rural refuge for highly paid executives and other professionals who will continue to commute to Sacramento for work.

Table 4-6

ANNUAL AVERAGE WAGE AND SALARY EMPLOYMENT
EL DORADO COUNTY

		<u>1980</u>	<u>1981</u>	<u>1982*</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>
Total, All Industries	<u>1</u>	20,225	20,675	19,900	20,300	21,900	23,100	24,700	26,200	28,500	29,700	30,700
Agriculture/Forestry/Fisheries		250	250	200	200	300	400	200	300	300	300	200
Total Nonagriculture		19,975	20,425	19,700	20,000	21,600	22,800	24,500	25,900	28,200	29,400	30,500
Construction/Mining		1,200	1,025	900	1,100	1,400	1,600	2,000	2,300	2,700	2,800	3,200
Manufacturing		1,275	1,250	1,100	1,100	1,200	1,500	1,700	1,700	2,000	2,000	2,100
Lumber/Wood Products		700	625	500	600	600	600	700	900	1,500 <u>2</u>	1,500	1,500
Other Manufacturing		575	625	600	500	600	900	1,000	800	600 <u>2</u>	500	600
Transportation/Public Utilities		925	950	800	700	600	700	700	900	1,000	900	1,000
Wholesale Trade		400	400	400	400	500	500	500	600	600	700	700
Retail Trade		4,950	5,200	5,100	5,100	5,500	6,000	6,700	6,800	7,000	7,300	7,500
Finance/Insurance/Real Estate		1,200	1,225	1,200	1,400	1,500	1,500	1,500	1,300	1,400	1,500	1,600
Services		4,950	5,100	4,900	5,300	5,800	5,700	5,900	6,400	7,300	7,600	7,600
Government	<u>4</u>	5,075	5,275	5,300	5,000	5,000	5,300	5,500	5,800	6,100	6,600	6,800
Federal		750	700	800	800	700	700	800	800	800	1,000	1,000
State		425	500	500	500	500	600	500	500	500	500	500
Local/Education	<u>5</u>	3,900	4,075	4,000	3,700	3,800	3,900	4,200	4,500	4,800	5,200	5,400

* Employment is rounded to the nearest 100 beginning with data for 1982.

1 Employment reported by place of work. Does not include proprietors, the self-employed, unpaid volunteers or family workers, private household workers and persons involved in labor-management disputes. Detail may not add to totals due to independent rounding.

2 Starting with 1988, category changed from lumber and wood products to durable goods.

2 Starting with 1988, category changed from other manufacturing to nondurable goods.

4 Includes all civilian employees of federal, state, and local governments, regardless of the activity in which the employee is engaged.

5 Local government includes employees of counties, cities, and special districts. Education includes employees of public schools at both the state and local levels.

EXISTING HOUSING CONDITIONS

Introduction

The analysis in this chapter examines the characteristics and conditions of the existing housing stock. The most complete data available for this evaluation are contained in the 1990 Census and the El Dorado County Affordable Housing Study (Rural California Housing Corporation 1990).

The section on housing characteristics considers the type of unit, persons per unit, size, vacancy rate, residential sales, and rental activity. The housing conditions section describes the state of the existing housing stock.

Housing Characteristics

As discussed previously, El Dorado County has experienced a rapid increase in population over the past two decades. During the period 1980 to 1990, a 37 percent increase in housing units occurred (from 44,987 to 61,448 units).

The final 1990 Census housing counts for each of the 29 census tracts are shown in Table 4-7. Nine of the tracts are in the Lake Tahoe Basin while the remainder are located on the West Slope. Breakdown of housing data by census tract is beneficial for examining housing variables including population, housing units, household size, and vacancy rates within different areas of the County.

Household Size: Following the 1980 Census, it was noted that the size of the average household dropped from 2.95 persons per household in 1970 to 2.68 in 1980. The 1990 Census has revealed that this trend did not continue in El Dorado County in the 1980s. Average household size in the County has remained steady at 2.66 persons.

Vacancy Rates: According to the 1990 Census, the vacancy rate for the unincorporated portion of the County was 20.5 percent. This unusually high rate is primarily attributed to the large number of seasonal recreational residences located in Pollock Pines, Grizzly Flats, and the Lake Tahoe Basin.

On the West Slope, the vacancy rate ranges from a low of 4.39 percent in Tract 308.01 (northern Cameron Park and Rescue, areas of very few rentals), to as high as 95.03 percent in Tract 314.03 which encompasses U.S. Forest Service lands south of U.S. Highway 50 between Park Creek and Alpine County. Vacancy rates for the population centers on the West Slope (El Dorado Hills, Cameron Park, El Dorado, Diamond Springs and Placerville) are between 4.5 and 10 percent. Currently, the vacancy rate could be significantly higher due to the recession.

TABLE 4-7
HOUSEHOLD INFORMATION BY CENSUS TRACT (County-wide)

Census Tract	Total Population	Household Population	Group Quarters	Total Housing Units	Vacant Units	% Vacancy Rate	Person Per Unit
**301.01	495	495	0	415	160	38.55	1.94
***.02	3,800	3,775	25	2,472	1,169	47.29	2.88
**302	4,414	4,348	66	2,496	845	33.85	2.59
***303	5,298	5,288	10	3,460	1,232	35.61	2.37
**304.01	3,875	3,874	1	2,918	1,371	46.98	2.50
***.02	3,890	3,832	58	2,395	683	28.52	2.20
*305.01	4,492	4,433	59	3,124	1,493	47.79	2.68
**..02	2,479	2,479	0	1,528	631	41.30	2.76
*.03	909	894	15	2,207	1,842	83.46	2.41
306.01	3,434	3,434	0	1,339	113	8.44	2.80
.02	5,036	4,860	176	2,199	367	16.69	2.56
.03	2,429	2,395	34	1,555	656	42.19	2.63
307	10,160	10,160	0	3,604	265	7.35	3.04
308.01	2,973	2,973	0	1,071	47	4.39	2.90
.02	9,946	9,935	11	3,881	288	7.42	2.76
.03	4,942	4,942	0	1,918	93	4.85	2.71
.04	4,773	4,773	0	1,714	90	5.25	2.94
309.01	2,414	2,414	0	943	85	9.01	2.81
.02	3,781	3,756	25	1,317	59	4.48	2.97
+ +310	4,766	4,660	106	2,096	107	5.10	2.29

TABLE 4-7
HOUSEHOLD INFORMATION BY CENSUS TRACT (County-wide)

Census Tract	Total Population	Household Population	Group Quarters	Total Housing Units	Vacant Units	% Vacancy Rate	Person Per Unit
+311	4,691	4,631	60	2,014	106	5.26	2.40
+ +312	4,648	4,214	434	1,767	81	4.58	2.24
313.01	2,908	2,880	28	1,247	120	9.62	2.53
.02	4,394	4,394	0	2,097	281	13.40	2.42
314.01	8,544	8,535	9	3,672	632	17.21	2.81
.02	3,931	3,931	0	2,063	619	30.00	2.72
.03	121	121	0	965	917	95.03	2.52
315.01	7,465	7,457	8	2,842	141	4.96	2.76
.02	4,987	4,847	140	2,129	110	5.17	2.33
TOTAL	125,995	124,730	1,265	61,448	14,603	23.76	2.66

- * Tahoe Basin Unincorporated
- ** City of South Lake Tahoe
- *** Split City of South Lake Tahoe/Unincorporated
- + City of Placerville
- + + Split City of Placerville/Unincorporated

Source: 1990 Census

Production Trends: During the years 1980 to 1991, the number of new housing units in the County authorized by building permits has fluctuated from a low of 910 units in 1982, to a high of 2,340 units in 1988. Table 4-8 illustrates building permit activity for 1985-92 (87 percent of which were for single family dwellings). A review of this table reveals that building permit activity dropped off significantly in 1991, 1992, and the first half of 1993 due to the recession. Not all building permits issued, however, result in construction of a dwelling or other building. Table 4-9 shows the number of dwelling units by type which were finalized (constructed) during the period 1990 through the first half of 1993.

TABLE 4-8
BUILDING PERMIT TRENDS, UNINCORPORATED EL DORADO COUNTY (Units)

	1985	1986	1987	1988	1989	1990	1991	1992	Average	1993 Jan.-June	1994	1995	1996	1997
New dwelling units permitted:	1,633	1,700	2,144	2,254	2,014	1,890	1,512	975	1,765	367	634	548	473	409
Dwelling units finalized:			N/A	N/A	N/A	1,714	1,652	1,043	1,470	368				

N/A = Not available.

Note: August decline is 13.6 percent per year since 1988.

Source: El Dorado County Building Department

TABLE 4-9
FINALED RESIDENTIAL DWELLINGS 1990-1993

	1990	1991	1992	1993*	TOTAL
Single Family	1,498	1,312	972	341	4,123
2-Family	6	2	2	2	12
3-Family	3	-	-	-	3
4-Family	8	-	-	-	8
Apartments	83	220	-	-	303
Townhouses	17	12	2	-	31
Condominiums		6	-	-	6
Manufactured Dwellings					
Permanent	99	100	67	24	290
Temporary**	(163)	(163)	(122)	(42)	(409)
Secondary Residential Units					
TOTALS	1,714	1,652	1,043	368	4,776

Source: El Dorado County Building Permit survey data

* 1993 information January through June only

** Not included in totals

Within the Lake Tahoe Basin, the number of building permits authorized annually is strictly controlled by the Tahoe Regional Planning Agency (TRPA). The average number of permits issued for the unincorporated portion of the Basin since 1984 is illustrated in Table 4-10.

TABLE 4-10
TRPA BUILDING PERMIT ALLOCATIONS

Year	Unincorporated	South Lake Tahoe
1984	None	None
1985	None	None
1986	104	(Combined)
1987	107	(Combined)
1988	96	(Combined)
1989	24	39
1990	114	60
1991	114	60
1992	77	32
1993	83	(combined)

Note: No permits were issued in 1984 and 1985

Source: El Dorado County Building Department

Prices and Rent Levels

Housing Market: Housing construction and sales were at a high volume during the late 1980s. Homes were sold as soon as (or before) they were built, and values increased at a phenomenal rate. With the advent of the recession in 1990, however, sales and construction slowed considerably. Many houses at the upper end of the price scale sat on the market for months and were sold only after significant price reductions. According to the County Association of Realtors, sales activity has continued to be slow during the first half of 1993. Table 4-11 illustrates the rapid increase in home prices between 1988 and 1992. Table 4-12 shows average home prices for some West Slope communities.

TABLE 4-11
EXISTING HOME PRICES, EL DORADO COUNTY 1988-1992

	1988	1989	1990	1991	1992
2 BR	\$ 83,000	\$ 90,000	\$130,000	\$134,000	\$128,019
3 BR	\$120,000	\$138,000	\$186,000	\$182,000	\$177,503
4 BR	\$153,000	\$192,000	\$281,000	\$273,000	\$255,115
Condo	\$ 77,000	\$ 96,000	\$110,000	\$129,000	\$118,278
TOTAL	\$117,000	\$136,000	\$196,000	\$195,000	\$170,000

Source: *El Dorado County Affordable Housing Study; (RCHC, February 1991); El Dorado County Association of Realtors (1993)*

TABLE 4-12
AVERAGE PRICE BY AREA; EXISTING HOME SALES 1993

COMMUNITY	2 BEDROOM	3 BEDROOM	4 BEDROOM	5 BEDROOM	All Homes
Cameron Park	\$144,900	\$179,501	\$214,026	\$220,400	\$189,598
El Dorado Hills	\$157,750	\$195,618	\$290,625	\$385,730	\$263,912
Shingle Springs	\$115,000	\$151,500	\$190,418	\$363,500	\$211,786
Rescue/North	\$165,658	\$207,414	\$308,666	\$357,500	\$236,317
Latrobe/South	\$258,950	\$290,980	N/A	N/A	\$290,980
Placerville	\$118,721	\$156,911	\$190,928	\$197,500	\$148,384
Diamond Springs/ El Dorado	\$140,328	\$149,730	\$244,833	N/A	\$154,115
Pleasant Valley	\$121,400	\$189,016	\$219,125	\$242,500	\$183,479
South County	\$139,107	\$127,466	\$182,000	N/A	\$124,632
Coloma/Lotus	\$135,000	\$214,000	\$310,750	N/A	\$221,214
Swansboro	\$107,666	\$132,466	N/A	N/A	\$120,066
Camino	\$111,685	\$210,618	\$250,280	N/A	\$173,325
Pollock Pines	\$109,517	\$146,743	\$182,714	N/A	\$140,296
American River Canyon	\$98,000	\$111,500	N/A	N/A	\$104,750
Georgetown Divide/ Pilot Hill	\$136,973	\$173,617	\$176,271	N/A	\$147,974

Source: El Dorado County Board of Realtors

Rental Market: In 1990, the Rural California Housing Corporation conducted a survey of 18 apartment developments. Table 4-13 displays the results of this survey. Newly constructed units typically have higher rents particularly if they feature more amenities. Also, the majority of apartments are one or two bedroom units. There are very few three-bedroom units available, so large families are forced to rent houses which generally are more expensive.

TABLE 4-13
APARTMENT RENT SURVEY UNINCORPORATED EL DORADO COUNTY

MARKET RATE APARTMENTS	Number of Units	1 BEDROOM	2 BEDROOM	3 BEDROOM
Barnett Village	12		\$610	
Shingle Springs	26		\$595	
Blue Oak Manor	42	\$535		
Cameron Park				
Cambridge Garden	9	\$450		
Cameron Park	52		\$510	
Cambridge Oaks	14	\$475		
Cameron Park	6		\$550	
Cameron Oaks	152		\$635	
Cameron Park				
Copper Hill	8	\$630		
El Dorado Hills	40		\$755	
	8			\$965
County Club Gardens	12		\$510	
Cameron Park				
Crescenta Place	16		\$525	
Cameron Park				
Garden Circle	12		\$545	
Cameron Park	8			\$595
Golden Terrace	22		\$610	
Shingle Springs				
Greenwood Place	21		\$675	
Shingle Springs	2			\$745
La Crescenta Place	40	\$525		
Cameron Park	70		\$575	
Royal Oaks	70	\$444		
Shingle Springs	26		\$545	
MARKET RATE AVERAGE RENT		\$478	\$599	\$776

Low income families may qualify for subsidized apartments (only 25 percent of a family's income is required to be used for rental payments). Unfortunately, most apartments in the County are not inexpensive enough to allow the combined voucher/25 percent of income formula to pay the rent. In addition, there is a one to two-year waiting list for subsidized housing. Table 4-14 lists subsidized apartments in the County.

TABLE 4-14 SUBSIDIZED APARTMENTS				
Project Name	Number of Units	1 BEDROOM	2 BEDROOM	3 BEDROOM
Diamond Springs Apts. Diamond Springs Waiting List: 6 mos.-1 yr.	4 23 12	\$268	\$343	\$388
Diamond Sunrise (S) Diamond Springs Waiting List: 1-2 yrs.	23	\$295		
Green Valley Cameron Park Waiting List: 7 mos.	16 16 8	\$269	\$312	\$359
Ponderosa Pollock Pines Waiting List: 1-2 yrs.	8		\$375	
Shingle Springs Apts. Shingle Springs Waiting List: 1-2 yrs.	2 10	\$285	\$325	

As stated above, renting a single family home is even more difficult. In 1990, an Association of Realtors survey found that three-bedroom homes rented for between \$500 and \$1,250. Section 8 certificates will cover a range of \$650-675.

Housing Conditions Survey

The housing stock in the County's unincorporated area is relatively new; consequently, overall housing conditions are quite good. Approximately 7 percent of the year-round units were built before 1950; 26 percent built between 1950 and 1970, leaving 67 percent built since 1970 (1980 Census data). A Housing Conditions Survey was performed by the Rural California Housing Corporation in June of 1990 as part of the El Dorado County Affordable Housing Study (Rural California Housing Corporation 1990). Seventeen communities were surveyed using drive-by inspections. Two communities, El Dorado Hills and Rescue, were determined to not have a significant rehabilitation need and therefore units were not individually surveyed. It is noted in the report that overall there is a low percentage of substandard housing in the unincorporated areas of the County; however, some areas contain pockets of deterioration and disrepair. The overall good condition of the housing stock is attributed to its relative newness (67 percent of the dwellings were built after 1970). Results of the survey are contained in Appendix E.

LAND USE INVENTORY AND CONSTRAINTS ANALYSIS

Introduction

State law requires that all housing elements contain an inventory of land suitable for residential development including vacant sites and sites having potential for development and to provide an analysis of the relationship between zoning and public facilities and services to these sites.

Potential Land Available for Housing

Residential lands, which account for approximately 27 percent of the total land within the County, are subject to analysis in the Housing Element. The Land Use Element of the General Plan establishes six classifications for residential lands which will be described below. A discussion of opportunities for provision of affordable housing is also included within each classification. For purposes of this discussion, "affordable housing" includes housing affordable to very low, low, and moderate income households (as defined in Volume I of the General Plan). It should also be noted that second residential units are allowed by right in all residential zones (unless prohibited by CC&Rs). Second units could potentially provide some additional lower cost housing opportunities.

Rural Residential and Rural Residential Low Density: The Rural Residential areas can be characterized as having limited infrastructure and public services. Allowable density is one dwelling unit per 20 to 40 acres for Rural Residential and one dwelling unit per 40 to 160 acres for Rural Residential Low Density. Clustering of residential units is encouraged within the Rural Residential designation to preserve large areas for open space or agricultural production. The Rural Residential Low Density designation is intended to preserve larger land holdings with natural resource or agricultural value. Although the remoteness of many rural residential properties tends to keep housing prices lower than more accessible areas, this designation is not considered conducive to providing affordable housing opportunities due to overall land costs.

Low Density Residential: Low Density Residential lands are provided to establish areas for single family residential development in a rural setting while allowing agricultural land management activities. Public services that may be available include water, fire protection, improved roads, and, in a few areas, public sewer. The maximum allowable density is 1 dwelling unit per 5 acres with parcel sizes ranging from 5 to 20 acres. These lands would probably not lend themselves to affordable housing opportunities since demand for parcels of this size is intense, and land costs will probably remain fairly high.

Medium Density Residential: The Medium Density Residential classification establishes areas suitable for detached single family residences while permitting limited agricultural uses. The maximum allowable density is one dwelling unit per one acre with parcel sizes ranging from one to five acres. Affordable housing would probably be cost prohibitive even on one-acre parcels due to land costs. With Housing Element density bonuses and subsidies, this land use category might be able to accommodate affordable housing.

High Density Residential: This land use designation comprises those lands most suitable for intensive single family residential development at densities of one to seven dwelling units per acre. A total of 27,394 acres have been identified within this land use designation. High allowable densities, in combination with density bonuses permitted by the Density Bonus Program contained under Goal 3 of the Housing Element and the Planned Development density bonuses within the Land Use Element, should provide opportunities for affordable housing.

Multi-family Residential: The Multi-family land use designation identifies those lands suitable for high-density, multi-family structures such as apartments, condominiums, multi-plexes, and mobile home parks. The minimum allowable density is seven dwelling units per acre, with a maximum density of 24 dwelling units per acre. A total of 2,698 acres have been identified within this designation. A high potential for achieving affordable housing would be available through this designation using both the allowable densities and additional units available through the Density Bonus Program.

Commercial: Mixed-use developments would be allowed in some areas of the County with a commercial land use designation providing residential use is secondary to the primary commercial use. Some affordable housing opportunities may be provided through these mixed-use developments.

Vacant Sites: To ascertain vacant lands with high density and multi-family land use designations, a review was made of the County Data Base. Table 4-15 lists Multi-family and High Density designated vacant lands by traffic analysis zone.

Based on a maximum density of 24 units per acre, a total of 13,783 units could potentially be developed under the Multi-family land use designation. A total of 2,747.38 acres of vacant land bears the High Density designation. If developed at the maximum allowable density of seven units per acres, 19,232 units could potentially be developed. Due to environmental and other constraints, however, in all probability the maximum number of units could not be built.

TABLE 4-15
HIGH DENSITY AND MULTI-FAMILY VACANT LAND INVENTORY

Market Area	Acreage		Total Number of Units
	Multi-family Residential	High Density Residential	
American River Canyon	2	499	3,541
Coloma/Gold Hill		28	196
Cool/Pilot Hill	64	470	4,826
El Dorado Hills	266	8,714	67,382
El Dorado/Diamond Springs	610	1,057	22,039
Georgetown/Garden Valley	26	20	764
Latrobe		8	56
Mosquito		20	140
Placerville	341	1,776	20,616
Pleasant Valley	12	252	2,052
Pollock Pines/Camino	208	1,601	16,199
Shingle Springs/Cameron Park	490	5,425	49,735
Somerset/Fairplay		84	588
Tahoe Basin	730	8,245	75,235
TOTAL	2,749	28,199	263,369

Relationship to Zoning and Public Facilities: Development of available sites within the designated multi-family and high density areas of the County is dependent upon the zoning of the property and the availability of public services, particularly sewer and water.

The County's Zoning Ordinance regulates allowed uses within the various land use designations. An update of the Zoning Ordinance will occur after adoption of the General Plan update.

In the current Zoning Ordinance, single-family residential uses are allowed in almost every zone with the exception of commercial and industrial zones. Permanent mobile and manufactured homes are permitted in all zones which allow single-family residences (if not prohibited by CC&Rs). Mobile home parks are permitted in the Mobile home Park (MP), Commercial (C, CP, CG), and Tourist Residential (RT) Zones with a special use permit. Policy 2.2.1 of the Housing Element would permit mobile home parks in all residential land use designations subject to both the density standards of the district and approval of a special use permit. The potential development of multi-family units has also been adequately provided for in the Zoning Ordinance.

Table 2-4 of the Land Use Element finds the following zone districts compatible with the Multi-family land use designation: Multi-family Residential (RM), Limited Multi-family Residential (R2), Tourist Residential (RT), Mobile home Park (MP), and Neighborhood Service (NS [new zone district]).

As discussed previously, areas within the Rural Residential, Low Density, and in some respects Medium Density land use designations are classified as such because of the relative lack of services such as public water and sewer. Sometimes insufficient and undependable water supplies from private wells and soil limitations for septic systems further constrain development in these areas particularly in terms of securing the density necessary to provide affordable housing opportunities. Properties with these constraints would be zoned accordingly. In those situations where private water supply is dependable and soils are not limiting, clustered housing/mobile home parks could occur. Lands designated High Density and Multi-family generally have available public water and sewer. Policies within the Land Use Element would require public services prior to any high density development. This is further discussed in the Non-Governmental Constraints section below.

A review of the available data reveals that the County is in compliance with AB 2853 in that sufficient vacant land is zoned or designated for residential uses of all densities considering constraints imposed by the availability of public facilities.

Non-Governmental Constraints

Meeting the affordable housing demand is generally a complex production system that involves local and Federal government, bankers, labor groups, suppliers, public and private utilities, real estate persons, and, ultimately, the consumer. Three economic factors play a role in the decision to construct housing: (1) supply and demand; (2) the money market (cost of money); and (3) return on the investment.

Supply and Demand: Demand usually determines the kind of housing that is produced. The greatest demand is for single-family detached homes for small households in the middle and upper income range; consequently, to maximize their economic return, builders will usually respond to this demand. Unfortunately, there is little incentive for the builder to produce affordable housing even when demand exists since the risk is higher and the profit margin often lower.

The Cost of Money: Financing costs and sales commissions have a significant impact on the price of housing. Fortunately for home buyers, the cost of financing has dropped in the last year or so as a result of the recession. Lower interest rates also benefit the builder as there is generally a reliable supply of money available for construction. Currently, interest rates are hovering around seven percent, the lowest they have been in almost a decade.

Availability of Financing: The County conducted an analysis of the availability of financing by surveying a small sample of local mortgage brokers, banks, and realtors. The findings did not disclose a practice of discrimination due to race, average income, neighborhood characteristics, or other socio-economic factors.

Typically, lending institutions are more reluctant to lend on properties where the value of the land exceeds 30 percent of the total value of the property (house and improvements being less than 70 percent of the total value). Also, difficulty in financing may occur where a real estate appraiser has indicated that the time required for resale of the property may be six months or greater. These lending considerations are more prevalent in the rural areas of the County and/or where homes are situated on large acreage.

Lenders also play a role in determining what types of projects receive financing. Currently, most financing is being provided for single family dwellings; money for construction of rental units is limited.

Economic Return: Builders and developers who supply the available housing do so because of the expected return on their investment. Rising costs to the developer also contribute to the rising cost of housing. There is general consistency in the price of homes and land throughout the County. Parcels close to the urbanized U.S. Highway 50 corridor tend to be very expensive while those in the more remote areas are less expensive. Also, parcels far from the urbanized areas are usually larger. The larger size tends to offset a lower per-acre price. For example, one acre in Shingle Springs will cost about the same as five acres in Pleasant Valley. Besides locational differences, all price ranges are dependent on available services, topography, zoning, land use capabilities, and opportunities for further subdivision.

Costs associated with site preparation can have a major effect on the sale price of a lot or parcel. All major land divisions (creating five or more parcels) and parcel maps (creating four or fewer parcels) must be processed in accordance with the County Major or Minor Land Division Ordinances. As a result of ordinance standards and regulations, ultimate development costs can vary greatly depending on necessary road improvements, sewer and/or water line extensions, surveying fees, impact mitigation fees, and other variables. These will be discussed under Governmental Constraints.

Materials and labor costs will also affect the price of the house. According to the July-August 1993 issue of *Building Standards* magazine, the following building valuation data represents the average costs per square foot for construction:

Single family dwellings:

Type V masonry "good" construction	\$78.00/sq. ft.
Type V masonry "average" construction	\$60.80/sq. ft.
Type V wood frame "good" construction	\$74.00/sq. ft.
Type V wood frame "average" construction	\$52.30/sq. ft.

Apartment Houses:

Type V masonry "good" construction	\$87.00/sq. ft.
Type V masonry "average" construction	\$71.50/sq. ft.
Type V wood frame "good" construction	\$63.90/sq. ft.
Type V wood frame "average" construction	\$50.60/sq. ft.

Governmental Constraints

Governmental constraints most often cited as contributing to the rising costs of housing are land use controls such as density and development standards, the increasing level of required improvements for subdivisions, the lengthy permit process, and service impact fees. This section will briefly examine these issues.

County Development Fees: Development and impact fees have increased substantially over the past few years. Table 4-16 illustrates the costs involved for application and impact fees for a multi-family housing development and for a single family high density residential project.

As is shown on the Table, costs for a 50-unit subdivision would be approximately \$18,000 per lot. Costs for development of a multi-family project would be similar except for the subdivision development fees and somewhat lower building permit fees due to smaller units.

Assumptions For Table 4-16

The following describes the size of the project, dwellings etc., used in the Table for the purposes of determining applicable fees and impact charges. The unit size assumptions shown were selected to represent the likely sizes needed to represent affordable housing.

	Single Family	Multi-family	Second Dwelling
Number lots/units	50	50	1
Unit size (Square feet)	1,200	640	640
Garage size (Square feet)	480		
Carport size (Square feet)		400	240
Deck size (Square feet)	150	100	150

TABLE 4-16
APPLICATION AND IMPACT FEE COMPARISONS*

Description	Single Family Subdivision	Multifamily	Second Dwelling
Planning Dept. Tentative Map Fee	90		
DOT Tentative Map Fee	43		
Environmental Management Tent. Map Fee	1		
Planning Design Review Fee		24	
DOT Design Review Fee		6	
EID Facilities Improvement Letter	3	8	
Subtotal Initial Review/Approval	\$137	\$38	
DOT Improvement Plan Review	43	28 (Est.)	
DOT Improvement Inspections	500 (Est)	72 (Est.)	
DOT Final Map/Improvement Agreement	4		
Plan. Dept. Final Map Application	24		
EID Plan Improve. Plan Review	25 (Est.)		
EID Inspection of Improvements	200 (Est.)		
EID Water Meter/Installation	4946	3785	
EID Sewer Hookup/Installation	3456	2602	3456
Building Permit Fee	590	185	173
DOT Encroachment Application	69	7	69
DOT Encroachment Inspection	205	20	205
DOT Grading Permit	617	23	617
Fire Safe Requirement Review	137		137
Subtotal Improvement Permits	\$10,816	\$6722	\$4657
Park Fees (Quimby)	1000 (Est.)		
Fire District Impact Fee	356	356	356
Road Impact Fees (TIM)	2500	2000	2000
School Impact Fees	3180	1696	1696
Solid Waste Impact Fee	225	225	225
Subtotal Impact Fees	7261	4277	4277
TOTAL APPLICATION/IMPACT FEES PER LOT	\$18,214	\$11,037	\$8934

*Based on: Class I, 50 unit subdivision, December, 1993

Other clarifications and variables exist in the Table as follows:

1. Some fees are shown as estimates since they are based on a percentage of the cost of improvements.
2. Some fees vary by area of the County. This includes, sewer hookups, fire district impact fees, and road fees. The fees shown are typical of the Cameron Park area.
3. Sewer hookup fees are shown for the second dwelling which in many cases will not occur. If the second unit connects to the sewer service line on-site instead of connecting directly to the main line, the fee is not charged. Where septic systems are used, in-lieu of the connection fee, there are minor fees to Environmental Health to check the capacity of the existing system. Additionally, there may be system expansion costs. The costs in this situation may approximate the sewer hookup fee or potentially be higher.
4. Road impact fees are not now being collected for second dwellings. To satisfy the policies of the General Plan, it is expected, at a minimum, the \$2,000 multi-family fee will eventually be collected for these units.
5. There are no doubt some other fees collected by the State or other agencies which are not noted on the list. Generally, any other fees would only apply to the single family subdivision and multi-family projects. The Table does not include the extra cost if the project were subject to an EIR. This could add \$1,000 or more to the cost of each lot or multi-family unit. Due to the project size noted in this example, an EIR would rarely be required.
6. Park fees are based on a formula which determines the amount of land to be either dedicated for park use. A fee equal to the value of the land calculated in the formula. Therefore, the appraised value of the land has a significant effect on the park fee. This fee will vary depending on location within the County and in most instances may be higher.

Local Land Use Controls: The land use maps allow for substantially more residential units than the existing zoning permits. Land use regulations, however, do not constrain the availability of high density residential land for the construction of housing. Adequate land for multi-family and high density residential development has been allotted.

Development standards for specific residential zone districts are located in Appendix F.

Increasing Level of Required Improvements or Services: To protect the public health, safety, and welfare, a variety of improvements and service capabilities are required for development to occur. Under the Minor Land Division Ordinance, any parcel under 4.5 acres requires public water or sewer. Road improvements are required for all subdivisions if the roads do not meet County standards.

All major land divisions require construction of a variety of improvements prior to recordation of a final map and sale of individual parcels. Required improvements can include road upgrades, water and sewer lines, sidewalks, and street lights. The extent of the required improvements varies with the density of the subdivision. High density (one to seven units per acre) will have the greatest number of required improvements in order to mitigate the greater impacts. Most of the improvements are standardized such as road widths and construction methods. These standard improvements are provided in the Design and Improvement Standards Manual (adopted May, 1986, revised May, 1990).

The Planning Department has estimated that the costs of improvements for a rural subdivision (parcels three acres and more) are \$20,000 per parcel and \$35,000 for standard (high density) subdivisions.

Permit Approval Processing Time: In the past, minor land divisions (parcel maps) often required up to six months to process through review by the affected agencies, complete the environmental documentation as required by State law, and proceed to public hearing. Major land divisions took between six months and two years to receive tentative approval. However, a new permit streamlining procedure has just been instituted, and processing times are expected to decrease substantially.

Building permit plan check presently requires three to four weeks; after the plans are checked, the permit and plans are retained pending final structural inspections. During the course of review, the Planning Department reviews permits for conformance with the appropriate development standards.

Capacity of Local Infrastructure: The capacity of local services and facilities is a major barrier to growth in the County. There is limited public water and sewer service in certain areas of the County particularly the cities of South Lake Tahoe and Placerville and other urbanized areas. The South Lake Tahoe Public Utilities District and the El Dorado Irrigation District (EID) provide water and sewer service. The Georgetown Divide Public Utilities District provides water only. Their service boundaries are shown in Chapter 5, Figure 5-1. Other small districts throughout the County also provide water service.

Rapid growth on the West Slope of the County is outpacing the ability of the utility districts to provide service. This has resulted in sewer and water moratoriums in different areas of the County at various times. The water treatment plant in El Dorado Hills was determined by EID to be at capacity. After completion of a study, EID chose to do an on-site expansion. Construction has begun and should be completed by the Summer of 1994.

The long-term availability of water service for most of the West Slope is dependent on a major project presently in the design and environmental review stages. If and when the White Rock project is constructed, it will provide a long-range solution to meeting the water demands of the County.

Building Codes: The County of El Dorado's building codes do not function as a constraint to residential development. In 1989, El Dorado County adopted the Uniform Building Code, Uniform Mechanical Code, Uniform Plumbing Code, Uniform Administrative Code, Uniform Housing Code Uniform Code for the Abatement of Dangerous Buildings, and the National Electric Code. The County Building Department uses a two-phase approach to assure building code compliance: (a) review of building applications to ensure that development plans comply with local regulations; and (b) conducting field inspections to ensure compliance during construction. This method is not unduly burdensome to residential developers.

It is apparent that requiring new development to pay for the cost of services/facilities to accommodate increasing population is very expensive. As State and local tax revenues diminish, future residents may be compelled to fund the expansion of services and facilities which they demand resulting in an increase in housing costs. To make the most efficient use of these expanded services, the average home buyer must be willing to accept such cost-effective solutions as smaller, more efficient houses with fewer amenities on smaller lots. To aid in these solutions, government should be responsive to development alternatives which reduce housing costs while at the same time continue to protect the public welfare.

Local Utilization of Housing Assistance Programs: In the past, the California Department of Housing and Community Development has acted as the County's Public Housing Authority in implementing existing Federal and State funding assistance programs mentioned in this element. Due to the program criteria and difficulty in overall program acceptance, the majority of aid has gone to residents of the cities of Placerville and South Lake Tahoe. This is expected to change, however, as the County Board of Supervisors recently approved the creation of a County Public Housing Authority which will enable the County to vigorously pursue funding for affordable housing programs.

In November 1980, the El Dorado County Community Action Council, approved by the Board of Supervisors, began administering a California HCD Section 8 Housing Renter's Assistance Program. This program provides rental assistance to households throughout the County. The program presently serves 185 households in El Dorado County, Placerville, and South Lake Tahoe.

HOUSING NEEDS

Introduction

This section identifies the County's housing needs based on regional demand factors, current affordability levels, termination of existing subsidized units, and the special needs population. The purpose of assessing these issues is to determine the direction of the County's housing goals, objectives, and programs.

Sierra Planning Organization Regional Housing Needs Determinations

Local jurisdictions must meet certain mandates of State law with regard to housing, including: (1) housing demand (the total number of units needed to house the population); and (2) the share of housing needs of persons of all socioeconomic levels in all areas within the County's jurisdiction. State legislation enacted in 1980 requires the Sierra Planning Organization (SPO) to determine regional and local housing needs in the four County mountain region for persons of all income levels. All local jurisdictions must make a sustained and serious attempt to meet the housing needs determined by SPO. SPO's determinations are based on:

1. California Department of Housing and Community Development's household projections by income groups for January 1, 1990, to July 1, 1997;
2. 1990 U.S. Census Report C90-PL-1 on total population and total housing units;
3. Sierra Planning Organization growth projections for 1990 to 2000; and
4. Sierra Planning Organization household income projections for 1980 to 1990.

The most recent determinations were prepared and published by SPO in the "Regional Housing Allocation Plan for Sierra Planning Organization," adopted as amended in December of 1991 (Appendix D). Government Code Section 65584(c) allows all jurisdictions a period of 90 days to review and revise the determinations contained in the SPO housing determinations report. The 1991 report was accepted by the County.

Housing Element updates, including the development or modification of existing housing programs, should consider the regional housing shares. As indicated in Table 4-17, SPO's 1990 to 1997 projected housing needs determinations allocate 17,335 units to the unincorporated portions of the County, distributed as follows:

1. 3,937 units affordable to very-low-income households;
2. 3,234 units affordable to low-income households;
3. 4,043 units affordable to moderate-income households; and
4. 6,122 units affordable to above-moderate-income households.

SPO's total housing needs determination for the County deals strictly with the projected housing need from 1990 to 1997. The projected housing need is based on the number of additional housing units needed to accommodate the projected regional growth in households. SPO's housing needs determination does not address issues of unmet past needs or existing and current needs.

Table 4-17

REVISED
SIERRA PLANNING ORGANIZATION

EL DORADO COUNTY

1990 HOUSEHOLDS BY INCOME GROUP*

	<u>VERY LOW</u>	<u>OTHER LOW</u>	<u>MODERATE</u>	<u>ABOVE MOD.</u>	<u>TOTAL</u>
Incerville	1,018	679	815	882	3,394
South Lake Tahoe**	1,984	1,811	2,070	2,760	8,625
Balance of County	<u>7,313</u>	<u>5,920</u>	<u>7,906</u>	<u>13,687</u>	<u>34,826</u>
TOTAL	10,315	8,410	10,791	17,329	46,845

1997 FAIR SHARE HOUSEHOLD PROJECTIONS

	<u>VERY LOW</u>	<u>OTHER LOW</u>	<u>MODERATE</u>	<u>ABOVE MOD.</u>	<u>TOTAL</u>
CD Housing Goals	22%	18%	23%	37%	100%
Incerville	1,018	690	881	1,417	4,006
South Lake Tahoe**	2,041	1,864	2,130	2,840	8,875
Balance of County	<u>11,250</u>	<u>9,154</u>	<u>11,949</u>	<u>19,809</u>	<u>52,161</u>
TOTAL	14,309	11,708	14,960	24,066	65,042

ASSUMPTION: Average 4.8% annual county growth rate

1990 - 1997 FAIR SHARE NEEDS ALLOCATION

	<u>VERY LOW</u>	<u>OTHER LOW</u>	<u>MODERATE</u>	<u>ABOVE MOD.</u>	<u>TOTAL</u>
Incerville	0	11	66	535	612
South Lake Tahoe**	57	53	60	80	250
Balance of County	<u>3,937</u>	<u>3,234</u>	<u>4,043</u>	<u>6,122</u>	<u>17,335</u>
TOTAL	3,994	3,298	4,169	6,737	18,197

Source: Housing and Community Development, "Household Projections by Income Group" (From final 1990 U.S. Census Household totals)

South Lake Tahoe Housing is allocated and regulated by the Tahoe Regional Planning Agency

Housing Costs and Ability to Pay

An affordability index of 25 percent of income is currently being used by mortgage companies to gauge housing affordability. Any housing payment over 25 percent of a household's gross income would be considered unaffordable. With utilities included, the affordability index increases to 30 percent.

The median income for the County (based on 1990 census figures) was \$39,823. Based on this figure and the affordability index state above, those earning the median income would have a monthly housing allowance of \$830. Those falling within the median income category would not qualify for purchase of the average priced three bedroom house in the County (\$182,000).

While moderate-income renters have more choices for affordable housing, low-income renters are spending far more than 25 percent of their income for housing. A family of four with an income of 50 percent of the area's median income would be far out-spending their housing allowance to rent the average three- or even two-bedroom apartment available in unincorporated El Dorado County. Based on the 25 percent standard, a single parent receiving \$624 from AFDC for the support of two children cannot afford market rents since to be affordable an apartment would need to cost no more than \$156 per month. Even with a food stamp allowance (a maximum of \$292) added, the 25 percent of income housing allowance would be only \$229.

The 1980 census found that 75.7 percent of lower income renter households in the unincorporated communities were overpaying for housing, and 59 percent of owners were overpaying. The 1990 census figures show that 60 percent of all renter households were paying more than 25 percent of their incomes for rent, not including utilities. In lower income renter households in the unincorporated communities, the figure has risen to 79 percent for those overpaying for housing. A full 50 percent of the total number of lower-income families were paying more than 35 percent of their total income for rent. Of the owner-occupied households, the 1990 census figures show that 42 percent of all owner-occupied households were paying more than 25 percent of their income for mortgage payments. Fifty seven percent of the lower-income owner-occupied households paid more than 25 percent of their total income for housing while 38 percent of the total number of lower-income owner-occupied households paid more than 35 percent of their income for housing. It is clear that the problem of overpayment has intensified over the past decade, not only for very-low- and low-income households but for moderate-income households as well.

Tables 4-18 and 4-19 demonstrate the housing affordability gap between newly constructed rental and purchased housing and the ability of those households at or below the area's median income to pay. These Tables were extracted from the Affordable Housing Study (Rural California Housing Corporation 1990). While these tables do not reflect 1993 interest rates, permit fees, etc., the tables do represent the relative magnitude of subsidies required to provide affordable housing to households before the County median income levels.

Table 4-18

**HOUSING AFFORDABILITY GAP
NEWLY CONSTRUCTED RENTAL HOUSING
EL DORADO COUNTY**

DEVELOPMENT COSTS

UNIT DEVELOPMENT COST		\$76,000
Land	\$7,000	
Site Improvements	\$7,000	
Construction	\$36,000	
Permits & Fees	\$9,000	
Soft Costs/Profit	\$17,000	
DEVELOPER EQUITY 20%		\$15,200
LOAN REQUIRED		\$60,800

RENT CALCULATION

	MONTHLY	ANNUALLY
Debt Service 11%, 30 years	\$580	\$6,960
Operations/Management	\$175	\$2,100
Reserves	50	600
Return	0	0
RENT	\$805	\$9,660
Minimum Income*	\$3,220	\$38,640 **

*Based on 25% of income spent on housing costs

**El Dorado County Median Income = \$37,500

SUBSIDY REQUIRED TO BE AFFORDABLE

	VERY LOW-INCOME*	LOW INCOME**
Yearly Income	\$18,750	\$30,000
Monthly Rent***	\$391	\$625
Actual Rent	\$805	\$805
Gap: monthly rent	\$414	\$180
Development subsidy required per unit for affordability	\$43,512	\$18,901

* 50% of County Median Income of \$37,500

** 80% of County Median Income of \$37,500

*** Based on 25% of income spent on housing costs

Table 4-19

**HOUSING AFFORDABILITY GAP
NEWLY CONSTRUCTED SINGLE FAMILY
EL DORADO COUNTY**

DEVELOPMENT COSTS

COST ITEMS	COST ESTIMATE
Housing Construction Cost 3br/2ba 1,100 sq.ft. @ \$45/sq.ft.	\$49,500
Land (Finished Lot)	\$90,000
Soft Costs	\$10,000
Permits & Fees	\$15,500
Overhead/Profit	\$15,000
Total	\$180,000

AFFORDABILITY

	Above Moderate Income	Above Moderate Income	Moderate Income	Low Income
Sales Price	\$180,000	\$150,000	\$100,000	\$70,000
Down Payment (10%)	\$18,000	\$15,000	\$10,000	\$7,500
First Mortgage	\$162,000	\$135,000	\$90,000	\$62,500
Monthly Payment 9.5%	\$1,360	\$1,140	\$760	\$530
Taxes & Insurance	\$183	\$158	\$117	\$92
Monthly Housing Cost	\$1,543	\$1,298	\$877	\$622
Minimum Monthly Income*	\$6,173	\$5,193	\$3,507	\$2,487
Minimum Annual Income	\$74,080	\$62,320	\$42,080	\$29,840
Percent of Median Income (\$37,500)	198%	166%	112%	80%

*Based on 25% of income spent on housing costs.

Termination of Housing Subsidies

A chart of the subsidized apartments on the Western Slope of El Dorado County (Table 4-20) reveals that six of the 13 apartment complexes listed are located within the City limits of Placerville. Of the seven subsidized multi-family complexes located in the unincorporated area of the County, two are located in Cameron Park, two in Diamond Springs, one in Shingle Springs and two in the Placerville area.

None of the subsidized apartment units will be subject to termination of their Federal mortgage or rent subsidies during the period from 1992 through 1997 (Table 4-21) (Litwinovich 1992).

Special Housing Needs

Special housing needs include housing for the elderly, disabled (particularly those in need of specially designed units), the homeless, battered women and children, households in poverty (including female-headed households), large households, overcrowded households, Native American households, and seasonal and/or migrant farm workers.

Persons With Incomes Below The Poverty Level: The 1990 U.S. Census estimates that there were approximately 4,522 households, or 10,968 residents, with incomes at or below the 1989 poverty level of \$12,674 for a family of four.

The poverty level is based on the 1961 assumption that families of three or more persons spend approximately one-third of their income on food. The "poverty level" was set at three times the cost of the U.S. Department of Agriculture's "economy food plan" (the least costly of their four nutritionally adequate family food plans). Housing costs were not included in this calculation as 1961 housing costs generally did not consume more than one-fourth of a family's total disposable income.

The definition of "poverty level" is determined at a national level by the Social Security Administration and does not take into account the higher costs of living in particular states or regions. The same income level which is recognized as "poverty" in North Dakota, for example, is also the "poverty level" in California even though housing costs are considerably higher in California.

Table 4-20

APARTMENT COMPLEXES IN EL DORADO COUNTY (WESTERN SLOPE)

Carson Ridge 2880 Schnell School Road Placerville, CA 95667 Manager: Mrs. Hansen 626-1380	Subsidized 1-3 bedrooms (30% of income) To move in - 1st month rent & security deposit equal to 1 month rent	78 units \$900-1,000 income/month SS & good credit - \$800/mo. Const. 1983 & 87
Country Club Gardens 2135 Garden Circle Cameron Park, CA 95682 677-1646	1 & 2 bedrooms \$425 & \$495 To move in - 1st month rent & \$200 deposit No pets	24 units Min. income - 3x rent asked Const. 1973
Deerview Park Apartments 2880 Schnell School Road Placerville, CA 95667 626-8600	Subsidized 1 & 2 bedrooms (30% of income) To move in - 1st month & last month rent	48 units Very low income - no min. income Const. 1982
Diamond Springs Apartments 643 Pearl Place Placerville, CA 95667 622-8553	Subsidized 1, 2, 3 bedrooms (30% of income) To move in - 1st month rent & \$200 deposit.	39 units Min. income - \$1,000/month Const. 1984 & 85
Green Valley Apartments 2640 La Cresenta Cameron Park, CA 95682 677-3351	Subsidized 1, 2, 3 bedrooms (30% of income) To move in - 1st month rent & security deposit equal to 1 month rent	40 units Min. income - \$11,800/year Const. 1984
Abraham Lincoln Manor 6600 Mother Lode Drive Placerville, CA 95667 Manager: Ruby Taylor 621-0959	Studio & 1 bedroom units (30% of income) FOR SENIORS ONLY	55 units Minimum income
Sunrise Gardens 1400 Woodman Circle Placerville, CA 95667 626-3394	1 & 2 bedrooms (30% of income) FOR SENIORS	Min. income - 1 bed. \$11,850 gross - 2 bed. \$13,500 gross 67 units, 2 year waiting list
Woodridge East Apartments 2811 Cold Springs Road Placerville, CA 95667 622-7784	Subsidized 1, 2, 3 bedrooms (25-30% of income) To move in - equal to one months rent	100 units Min. income - \$680/month Const. 1973 & 74
Placerville Apartments 2864 Coloma Street Placerville, CA 95667 622-1186	Subsidized 1, 2 & 3 bedrooms (30% of income) To move in - 1st, & security deposit	84 units Min. income - 2 bed. \$11,000 Const. 1986
Tunnel Street Apartments Tunnel Street Placerville, CA 95667 626-6951	Subsidized 1 bedroom (30% of income) 4 handicapped apt. FOR SENIORS ONLY	39 units no minimum income Const. 1986

Table 4-20 (continued)

APARTMENTS COMPLEXES IN EL DORADO COUNTY (WESTERN SLOPE)
PAGE 2

<p>Gold Country Retirement Community 4301 Golden Center Drive Placerville, CA 95667 621-1826</p>	<p>1 & 2 bedroom apartments w/meals & Maid \$825-\$1,500/mo. To move in - 1st, last & & \$500 prep. fee FOR SENIORS ONLY</p>	<p>150 units No minimum income Const. 1986</p>
<p>Diamond Sunrise 4015 Panther Lane Diamond Springs, CA 95619 622-4121</p>	<p>1 bedroom units (30% of income) 4 handicapped apartments FOR SENIORS ONLY</p>	<p>23 units minimum income - \$500/mo Const. 1987 38 on waiting list</p>
<p>Shingle Springs Apartments 3900 Creekside Court Shingle Springs, CA 95682 No on-site manager-call Sandy Hinz 823-2477</p>	<p>1 & 2 bedrooms \$335 - \$375 (30% of income)</p>	<p>12 units No minimum</p>

SOURCE: EL DORADO COUNTY SENIOR AND FAMILY SERVICES

Table 4-21

INVENTORY OF LOW INCOME RENTAL UNITS
SUBJECT TO TERMINATION OF FEDERAL MORTGAGE AND/OR RENT SUBSIDIES
BY THE YEAR 2008

PROJECT NAME STREET LOCALITY ZIP CODE	OWNER NAME STREET LOCALITY ZIP CODE	FHA PROJECT # SECTION OF ACT OWNER/TENANT TYPE RENT SUP, FLEX, TPA	LOAN AMOUNT LOAN TERM, INTEREST RATE PROCESSING STATUS FINAL ENDORSEMENT DATE	SECTION 8 CONTRACT # PROGRAM/FINANCE TYPE SECTION 8 TYPE HAP AGREE/EXEC DATE	TOTAL UNITS TOTAL ELDERLY		EARLIEST DATE OF SUBSIDY TERMINATION*	
					FHA	SECTION 8	FHA	SECTION 8
1 WOODRIDGE E PHASE I 2785 COLD SPRINGS RD PLACERVILLE 95667	PLACERVILLE INVEST 2811 COLD SPRING R PLACERVILLE, CA 95667	13644084 236(J)(1) LD FAM	\$592,200 40 7.00 FINAL ENDRS CURRENT 29FEB72		50 0	0 0	28FEB92 (+20)	
2 WOODRIDGE E PHASE II 2811 COLD SPRINGS RD PLACERVILLE 95667	WOODRIDGE INVESTOR 66 E SANTA CLARA S SAN JOSE, CA 95113	13644192 236(J)(1) LD FAM	\$651,500 40 7.00 FINAL ENDRS CURRENT 11OCT73		50 0	0 0	11OCT93 (+20)	
3 DEER VIEW PARK..... PLACERVILLE	SIERRA DEVELOPMENT	---		CA30R000006 NEW CON FMHA SEC 515/8 27FEB81 23AUG82	0 0	47 0	23AUG02 (+ 0)	
4 CHATEAU BIJOU 3421 SPRUCE AVE SOUTH LAKE TAHOE 95705	DHA REALTY C/O 3421 SPRUCE AV SOUTH LAKE TAHOE, CA 95705	13644117 236(J)(1) LD FAM	\$1,241,800 33 10.00 FINAL ENDRS CURRENT 03AUG72		92 0	0 0	03AUG92 (+20)	
5 SIERRA GARDENS 1801 LAKE TAHOE BL SOUTH LAKE TAHOE 95705	SIERRA GARDEN APTS PO BOX 1570 LODI, CA 95241	13644254 236(J)(1) LD FAM	\$1,323,900 40 7.00 FINAL ENDRS CURRENT 07AUG74		76 0	0 0	07AUG94 (+20)	

*Based on project status 4/1/91. Numbers in parentheses indicate years of subsidy still remaining at earliest date of termination.

†Most Flexible Subsidy projects have use restriction requiring retention of low- and moderate-income character for at least the remaining term of mortgage.

Prepared for California Housing Partnership by California Coalition for Rural Housing Project. Source: HUD MIDLIS and MIS databases.

Households with Children Below the Poverty Level, Including Single Parent Families: The 1990 Census considers two or more related persons living in the same household as a "family." Census counts showed a total of 27,656 families residing in unincorporated El Dorado County. Of the 13,577 families with children living with them, 624 were headed by a married-couple with incomes below the poverty level.

The Census also revealed that in 1990, 2,282 families with children were one parent households; 668 families with children (4.9 percent of all families with children) were headed by a single male, 162 of which had incomes below the poverty level; and 1,614 families with children (11.8 percent of all families with children) residing in the County were headed by a single female, 707 of which had incomes below the poverty level. Since it now generally takes two incomes to maintain a family at "middle" class standards, the average income level of single-parent families tends to be lower than that of two-parent families with a high incidence of one-parent families living near or below the poverty level. Working single heads of household must also pay for daily child care with costs ranging from a revolving scale based on income (State subsidized program, with a waiting list) to \$14 per day per child (private sector services).

Female Heads of Household: 1990 Census figures show a total of 5,782 households headed by females. Of these, 2,819 were single women; 1,557 of the single women were over 65 years of age, 1,483 of which lived alone; and 1,262 single women under the age of 65 constitute the rest of these households.

2,271 women headed families according to the 1990 Census data. Of those, 1,614 had children living with them while 657 were the head of families comprised of adult relatives including the elderly.

Of the 1,614 families with children (11.8 percent of all families with children) residing in the County headed by single females, 707 had incomes below the poverty level. On average, lower wages are paid to women than to men with comparable education and training (63 cents to the dollar) making families headed by single mothers more likely to have difficulty in affording adequate housing. As previously mentioned, a special need encountered by all single-parents is basic, low cost child-care. Other important needs include laundry rooms, close proximity to public transit, and neighborhood commercial facilities such as markets within walking distance.

692 women headed non-family households according to the 1990 Census. This group includes households consisting of "roommates" or "housemates" as well as houses owned by women who have rented rooms out to boarders.

Overcrowded Households: Homes that lodge more than 1.01 persons per room are considered "overcrowded" by HCD. According to this standard, there were 2,434 overcrowded households on the Western Slope in 1990. Approximately 948 of these households were owner occupied while another 1,486 were rented homes. Of these overcrowded households, a total of 383, (consisting of 94 owner occupied and 289 renter households) were severely overcrowded, sheltering more than two persons per room.

Large Households: Large households are defined by HCD as households having five or more persons. Of the 47,033 households in El Dorado County reporting in the 1990 Census, 4,638 or 9.8 percent of all households were classified as "large". Of those large households, 1,480 contained six or more persons.

Because the vast majority of conventional apartment units do not contain more than two or three bedrooms, it can be assumed that many large households that rent are paying higher rents by living in single-family houses. While no official data exist, local rental agencies report that locating a large home to rent at a reasonable price is nearly impossible. In addition, many landlords are reluctant to rent smaller homes to large families in situations where overcrowding would occur, making it even more difficult for large families to find safe, affordable housing.

Battered Women and Children: The Women's Center of El Dorado County operates a shelter for battered women and children and also provides shelter in local motels. The shelter provides housing for up to three weeks to give battered families time to work through difficult times or find other living arrangements. The shelter can hold up to 15 people at one time but is currently limited to seven due to budget constraints at the Women's Center. Short term housing and/or overflow shelter is provided by lodging victims in local motels. The Center reports that they shelter approximately 20 battered women and children per month. Currently the Women's Center reports a need for more "transitional" housing -- housing available at extremely low cost to provide time to save for the first and last month's rent and security deposits required to move into another dwelling.

Homeless Persons, Including Families With Children: Accurate statistics on the number of homeless persons in El Dorado County are not available. Those estimates available have not been broken down into incorporated and unincorporated portions of the County. Conversations with organizations involved in helping homeless families and individuals give an estimate of perhaps 100 homeless persons within the borders of El Dorado County every day. Many are "invisible" as they often camp out in National Forest or BLM lands or are well hidden in greenbelts near towns. One organization estimated that 80 percent of the homeless people they assisted were families with children, 60 percent of them single mothers. A recent increase has been noted, however, in the numbers of single men seeking assistance. Of the persons assisted, it was estimated that approximately 70 percent were local citizens displaced by eviction due to inability to pay their rent. The remaining 30 percent were persons on the move, many in search of work.

The special housing needs of homeless persons include:

1. temporary no-rent family housing where parents can save enough cash to pay the large move-in costs (usually the first or first and last month's rent and a security deposit which may be equal to another month's rent);
2. permanent housing units affordable on the family's income;

3. affordable single-room occupancy units for single men and women (similar to the YMCA or YWCA boarding hotels that used to exist in many cities); and
4. emergency shelter from severe weather situations such as might be provided by opening the National Guard Armory on very cold or stormy nights.

Other non-housing needs of homeless persons can include food, places to bathe and do laundry, assistance in finding work, child care, assistance in placing children in schools, medical and dental care, and counseling for problems with drugs, alcohol, or mental illness.

Elderly: In 1990, the senior population of El Dorado County, consisting of persons aged 65 and above, was 20,757 or roughly 16.5 percent of the total County population. The 1990 Census counted 9,520 elderly households of which 7,970 owned their homes and 1,550 lived in rented homes.

Among those senior citizens who do not own their own homes, securing adequate housing is often a problem. The main barriers to adequate, affordable housing are:

1. the inability to pay ever-increasing rents on fixed incomes consisting mainly of retirement or pension funds;
2. the need for housing which accommodates physical ability constraints (e.g., one story, wheel chair accessible); and
3. the need for housing which is close to public transportation and/or housing in close proximity to neighborhood commercial activities (e.g., corner markets).

Special housing needs are also encountered by heads of households who are the primary care givers for elderly relatives. Possible solutions to housing needs for families in this situation may be:

1. "granny flat" units which provide a sense of independence and privacy for all generations of the family; and/or
2. housing which accommodates physical ability constraints (e.g., one story, wheelchair accessible).

The non-housing needs of families in this situation could include:

1. the availability of day care for elderly who cannot be left unattended during the day;
2. access to senior programs, classes, and/or opportunities to socialize with other seniors (such as may be provided by a city or county recreation department, senior services department, or by a private organization or church); and

3. support groups for the family, and particularly for the primary care givers.

Disabled, Non-Institutionalized Persons 16-64 Years Old: It is estimated by the State Department of Rehabilitation that there are 8,183 persons with amputation or orthopedic disabilities living in El Dorado County. Some of these persons experience mobility problems and encounter difficulties in overcoming particular architectural barriers (Sierra Planning Organization 1992).

The local branch office of the Social Security Administration reports that in 1990 there were 2,310 blind and/or disabled persons collecting State Supplemental Income (S.S.I.) in El Dorado County. Of those persons, 2,244 were adults, and 66 were children (Callahan 1992).

Recognized Native American Groups: As discussed in the analysis of ethnicity (Table 4-4), the 1990 U.S. Census recorded 967 persons claiming American Indian, Eskimo, or Aleut ancestry living in the County.

One Federally recognized rancheria for a portion of the Miwok Indian people exists within the County near Shingle Springs. Presently there are eight homes on the 160 acre rancheria, an increase of six homes during the life of the 1984 Housing Element. A ninth home is presently under construction. Ultimate build-out will allow for 25 to 30 homes. As the rancheria is under Federal jurisdiction, the County has no control over the land use criteria or housing regulations within the rancheria.

Although members of other Native American groups reside within the County, they do not represent a sizeable group with special housing needs above those experienced by the County residents as a whole.

Seasonal and/or Migrant Farm workers: An agricultural economy of orchards, vineyards, and Christmas trees exists in the foothills and low mountain areas of the County. These agricultural businesses typically rely on a seasonal labor force which often must compete for affordable housing with the permanent population. The Agricultural Commission estimates that most of the 400 seasonal farm workers are housed in existing residential units which become overcrowded during the harvesting season. The problem has become worse since 1984 due to closure of some units because of such problems as the destructive behavior of some tenants and difficulties in meeting State housing standards.

STATUS AND EVALUATION OF EXISTING PROGRAMS

Evaluation of Achievements 1983-1990

In 1984, the Sierra Planning Organization issued the 1983-1990 Regional Housing Allocation Plan for Placer, El Dorado, Nevada, and Sierra counties in accordance with State law. Table 4-22 designates the allocation for El Dorado County, and indicates the number of housing units needed to be constructed for each of the four household income groups.

TABLE 4-23
1983-1990 HOUSING ALLOCATION

	Very Low	Other Low	Moderate	Above Moderate	TOTAL
Unincorporated West Slope	2,986	1,900	3,122	5,564	13,572
Placerville	175	96	128	133	532
Balance of County	257	176	203	247	883
TOTAL COUNTY	3,747	2,398	3,447	5,395	14,987

Source: Sierra Planning Organization

According to the plan, 14,455 units should have been constructed in the unincorporated portion of El Dorado County between 1983 and 1990. Building permit records indicate that approximately 11,400 units were built or planned between 1984 and April of 1990. The gross production figure shows the unincorporated area of the County nearly met the housing goal. The County did not, however, meet the critical goal of providing affordable housing opportunities for all income groups. While the total housing production goal of 76 percent was met, only five percent of the very-low and low-income housing goal was met.

To meet the goals of the Regional Housing Allocation Plan, 6,145 or 43 percent of the units produced during the seven year period were to be financially accessible to very-low and low-income households. Consultation with public housing finance agencies revealed that during that seven year period only about 315 housing units were built with public assistance to ensure affordability. These 315 dwelling units included units affordable to moderate-income households as well as very-low and low-income households. Because most of the affordable units were built as detached single-family homes, the surveyed agencies could not provide a breakdown of the income groups which benefited most from this housing. It is likely that many of the homes were purchased by moderate-income families rather than by the most needy (Rural California Housing Corporation 1991).

Evaluation of Programs Listed in the 1984 Housing Element

1. Programs to Pursue Attainment of the Regional Share of Housing Need

- a. "County staff will quantitatively measure the effectiveness of each program through an inventory of the number and types of units constructed, identifying those developments specifically constructed for low- to moderate-income effectiveness of the programs in a report published annually for review to be submitted to the Housing Advisory Commission, the Planning Commission, and the Board of Supervisors."

Evaluation: A review of the Planning Department records since the adoption of the 1984 Housing Element shows that other than the "sweat-equity" and senior housing projects, no developments targeted towards low-to moderate-income households were proposed. Due to the low number of such development, no reports were ever prepared; but the projects were discussed with the above-mentioned bodies.

- b. "Hold public information workshops with Sierra Planning Organization and Housing and Community Development designed to inform developer, contractors, and real estate brokers of the status of Federal and State funds, the procedures for accessing these funds, and for the completion of grant applications, and criteria for fund allocation, etc."

Evaluation: Although the information was not disseminated in a workshop format, referrals of individual developers were made to the Sierra Planning Organization who provided information on the status of Federal and State funds, the procedures for accessing these funds, completion of grant applications, and criteria for fund allocation. Several individuals were interested in Farmer's Home Administration programs, and they were referred to that agency. Referrals were also made to the Rural California Housing Corporation. The Sierra Planning Organization estimates they have received approximately ten such referrals from El Dorado County during the life of the 1984 Housing Element.

- c. "From the public information workshop, a list of public and private groups which provide housing information, grants, funding, programs, etc., will be compiled and distributed."

Evaluation: The Sierra Planning Organization has maintained this list and kept it current during the life of the 1984 Housing Element. The information has been provided to all those who have requested it.

2. Programs for the Provision of Affordable Housing Opportunities

- a. "Establish as policy the definition of low- to moderate-income or affordable housing units. Utilize State and Federal guidelines to determine the appropriate definition specifically tailored to the characteristics of the County population (e.g., income levels, household characteristics)."

Evaluation: The County adopted the definition of low- to moderate-income or affordable housing units utilized by the State of California's Housing and Community Development Department. The County also employed Federal Department of Housing and Urban Development definitions particularly when working with the Section 8 Rental Assistance programs. These definitions are included below.

"After every decennial U.S. Census, HCD prepares estimates for each county of the proportion of households in four income groups. The groups are based on the income groups defined in State law and implemented by HUD and HCD in their housing finance programs. The definitions include family size adjustment factors. For example, the income limit for a one-person household is 0.7 times the four-person income limit for that income level.

In general, the income limits for a four-person household are the following:

Very Low Income - Income not exceeding 50 percent of the median family income of the non-metropolitan county.

Other Low Income - Income between 50 percent and 80 percent of the median family income of the non-metropolitan county.

Moderate Income - Income between 80 percent and 120 percent of the median family income of the non-metropolitan county.

Above Moderate Income - Income above 120 percent of the median family income of the non-metropolitan county."

Table 4-23 shows how these definitions translate into numbers for El Dorado County and how those levels have changed from the period 1984 to 1992 Housing Elements.

TABLE 4-23 HOUSEHOLD INCOME LEVELS - 1980 AND 1990		
El Dorado County	1980¹	1990²
Very Low	\$ 0 - 11,540	\$ 0 - 18,750
Other Low	\$ 11,541 - 18,125	\$ 18,751 - 30,000
Moderate	\$ 18,126 - 22,485	\$ 30,001 - 45,000
Above Moderate	\$ 22,486 - On	\$ 45,001 - On
¹ 1980 U.S. Census		
² Sierra Planning Organization projections		

- b. "Fast track processing for all developments specifically targeted towards groups with low to moderate incomes. For example, projects targeted toward identified groups will be processed faster administratively, receive priority for agendas, etc. A project coordinator will be assigned to assist the developer in taking the project through the approval process. Community Design Review Committees will be encouraged to meet more frequently if the need exists."

Evaluation: This was not implemented. Other than the "sweat-equity" units, no developments specifically targeted towards groups with low to moderate incomes were proposed. The "sweat-equity" projects received no special prioritization or coordination.

- c. "Continue to coordinate procedures for streamlining permits or developments which have standardized designs and have been previously checked for code compliance."

Evaluation: The Master Plan Process was established in 1985 and has been in operation since that time. In this process a builder will submit blueprints for a design or designs which can be used for more than one house. The plans are checked and filed at the County Building Department. When the builder needs to use the plans, the proper applications are submitted for the project along with a site plan for the parcel and a copy of the floor plan. The pre-approved blueprints are then pulled from the County files for use by the builder. The plans remain current for up to three years (when the Building Code is updated). Builders who have pre-checked plans on file are notified that they may need to bring their plans into compliance with the updated codes. An information sheet is available to explain the process to those who may be able to benefit from using pre-approved plans (see Appendix G). The process has proved successful and continues to be improved each year.

In 1993, a permit streamlining process was inaugurated which should aid in processing discretionary development projects in a more timely manner.

- d. "Density bonuses shall be favorably considered for those developments that reserve at least 25 percent of the residential units for low- to moderate-income households. For example, incentives could come in the form of up to a 25 percent increase in allowed density (Government Code 65913.0), the selective waiver of development fees, etc., or a combination of incentives as may be agreed upon."

Evaluation: Although El Dorado County has a density bonus provision in place as required by State law, only one project utilized the bonus provision. This was a proposal for a congregate care facility for senior citizens in the Cameron Park area. The increased density was approved by the Planning Department, but the applicant later modified the project and did not make use of the density bonus. The project application was later withdrawn, and the facility never built. Fees have not been waived in the past for any housing project in El Dorado County.

- e. "Research the feasibility of adopting a residential incentive zone designed to aid developers in making lower-priced housing available. Within this district, the developer would agree to keep the average selling price (all units) below 80 percent of the average area market selling price in exchange for increasing the allowable density of the development."

Evaluation: The data collected during this study remain in the Planning Department archives. No such zone was ever implemented; however the concept will be re-examined during the development of the Zoning Ordinance after adoption of the General Plan.

- f. "Research the feasibility of creating a forum for the formation of nonprofit housing cooperatives. Hold community workshops with HCD to inform County residents of the procedures for forming independent housing cooperatives."

Evaluation: This was not done due to the shortage of staff and a heavy backlog of development applications. Establishment of a Public Housing Authority (as was authorized by the Board of Supervisors in August of 1993) will provide opportunities for workshops and disseminate information to County residents.

3. Programs for the Provision of Special Needs Housing

- a. "Coordinate a procedure for waiving or reducing the school mitigation fees for developments specifically designed for elderly residents."

Evaluation: With the approval of the affected school district, school mitigation fees were waived for the same congregate care facility that applied to make use of the density bonus as described in item 2.d above. Fees have not been waived for any other projects in the County.

- b. "Research the availability of State, local, and private subsidies for handicapped or elderly persons in terms of rental assistance and financial incentives for the developers of handicapped/elderly residential units. Investigate the feasibility of constructing cooperative housing units for groups with special needs."

Evaluation: Due to a lack of staffing, this research was not done as part of the Planning Department's responsibilities. The County does participate in the Federal Section 8 Rental Assistance program for handicapped and elderly persons. The percentage of eligible persons able to participate in the program is quite small, however, due to limited funding on the part of the Federal government.

4. Investigation of Local Governmental Constraints to Providing Affordable Housing

- a. "Review the existing fee schedule to determine if the amount of the fee is appropriate to cover the degree of impact or mitigation."

Evaluation: The County impact fees were reviewed in several studies to determine if the amounts being charged were sufficient to cover the costs of mitigation. These studies and the dates of their review were as follows:

- i. Road Fee Study entitled "Executive Report to the El Dorado County Board of Supervisors to Establish a Traffic Impact Mitigation Fee" conducted by the El Dorado County Department of Transportation in 1991;
- ii. School Impact Fee Study entitled "Assessment of the Growth Impact on Schools in El Dorado County" conducted by the County Office of Education in 1991;
- iii. Application Fee Study conducted as part of the Fiscal Year 93/94 budget process affecting fee increases for the Planning, Transportation, and Environmental Management Departments.

As the result of these studies, both the application and impact fees were raised to more appropriate levels. Due to recent changes in State legislation regarding school facilities funding, the school fees were raised again. While these higher fees did help the County and school districts begin to cover the increased costs of providing infrastructure and services, unfortunately the impact on the development of affordable housing was heightened.

- b. "Establish a program requiring agencies requesting mitigation to justify the request based in quantifiable information. The fee schedule will be reviewed annually to determine if the mitigation fee is targeted toward identified needs."

Evaluation: Agencies having development fees administered by the County are currently requested to submit quantifiable information as to the nature of the fee or any increases thereto. Development fees are reviewed and adjusted no more frequently than on an annual basis.

- c. "Explore all feasible methods to finance facility infrastructure improvements to accommodate continued growth including the redevelopment agency, phased capital improvement plans, formation of special tax assessment districts, local special revenue bonds, Federal and State grants, or other innovative financial alternatives."

Evaluation: The decreased availability of both State and Federal funds has necessitated an on-going commitment on the part of many County agencies to research all available possible sources of funding for the maintenance, improvement, and expansion of infrastructure. The above-mentioned studies include examination of various methods of infrastructure financing. For example, the 1991 study "Assessment of the Growth Impact on Schools in El Dorado County" includes a chapter entitled "Alternative Methods of Financing School Facilities" which lists five different ways in which funds might be raised for the construction of new schools and the relative advantages and disadvantages of each method.

- d. "Expand the existing computer files to compile a parcel information data base. From the data base, establish and maintain an inventory of sites suitably zoned within public service areas that can be reviewed by builders and developers to locate developable lands requiring a minimal amount of predevelopment costs."

Evaluation: A parcel-specific data base has been developed as a part of the General Plan update. The data base contains information regarding parcel size, zoning and land use designations, census tracts, and traffic analysis zones. The data base is accessible to the entire planning staff via computer terminal at the Planning and Building work stations.

The task of providing access to parcel specific information for use by the Planning and Building Departments has been proceeding on schedule. A Permit Tracking System was installed in 1987 and is currently in daily use at the Permit Center. Much of the County's Tax Assessment records are now also on a computerized system which can be accessed from computer terminals in the Planning, Building, and LAFCO offices. Training in use of the system has been provided by the County's Information Systems Support Department. These new systems will provide easier access to data concerning developable lands for the development community and the general public.

- e. "Continue to utilize the Housing Advisory Commission as a task force to study development costs (all phases) of housing and provide recommendations to the Board of Supervisors for reduction of constraints and financing costs."

Evaluation: The Housing Advisory Commission operated from 1981 until 1985. In 1990, the Affordable Housing Task Force was created through the use of a Community Development Block Grant for planning and research. The grant provided funds to complete both a needs assessment and a study entitled "El Dorado County Affordable Housing Study" which was released in February 1991. Some of the recommendations contained in that report, as well as information gathered during the needs assessment, have been included in this document.

5. Provision of Affordable Housing Through Self-Help or "Sweat Equity" Programs

- a. "Publish a public information packet advising potential owner-builders of Building Code criteria. The packet will include information specifically pertaining to helping them formulate and design their building plans."

Evaluation: This was implemented in 1991. The Permit Center now includes a self-serve Information Center where not only owner-builder Building Code criteria are available but also a whole series of Planning and Building packets containing detailed information on a variety of building and planning situations.

- b. "Establish a public awareness program showing the costs of base construction alternatives in an effort to promote the building of, and public acceptance of, small, no frill basic homes or rental units for the general public."

Evaluation: Due to budget constraints and shortage of staffing during the life of the 1984 Housing Element, this was never done.

- c. "Continue to support the existing self-help programs already occurring in the County."

Evaluation: During the life of the 1984 Housing Element, 85 self-help "sweat equity" homes were developed under the sponsorship of the Rural California Housing Corporation. The participating families who now own these homes are very-low and low-income households and include both one and two wage-earner families.

6. Discouragement of Discrimination Practices Which Deny Access to Housing

- a. "Support State and Federal laws prohibiting discrimination in the sale or rental of housing and refer possible violations to the responsible enforcement agency should they be discovered."

Evaluation: The County supports State and Federal laws prohibiting discrimination in the sale or rental of housing and refers possible violations to the responsible enforcement agencies.

- b. "Support the enforcement of law and regulations prohibiting discrimination in lending practices for residential loans: withdraw County funds from institutions that discriminate in their lending practices."

Evaluation: The County also continues to support the enforcement of law and regulations prohibiting discrimination in lending practices for residential loans. No violations in lending practices have been discovered.

- c. "During the preparation and update of the community area plans, the County shall determine if the existing land use densities within the area plan provide adequate sites for housing opportunities. The County shall support housing in those areas where the infrastructure exists to support high-and medium-density residential uses. If appropriate, densities are not provided within those areas, the County shall make findings as to why those areas are not identified with higher density residential development."

Evaluation: The lack of infrastructure such as adequate roads, water and sewage services, as well as the extreme topographical conditions of certain portions of the County tend to limit the amount of lands available for high density residential developments. The General Plan provides policies that restrict development of high density residential uses to areas where adequate services are available. Due to a shortage of both staff and funding, the area plans were not updated during the life of the 1984 Housing Element.

- d. "Investigate the feasibility of allowing older mobile-homes on residential parcels of less than ten acres with a special use permit."

Evaluation: At the time of the writing of the 1984 Housing Element, County ordinance allowed mobile homes only on parcels of ten acres or more, and the applicant was required to obtain a special use permit for that purpose. Ordinance 3606 (see Appendix H) was adopted on January 21, 1986, permitting by right a mobile home on any parcel zoned for single family residential use. In addition, temporary mobile homes may be placed on parcels which already contain a single-family residence for use by caretakers who assist elderly homeowners or to house family members who are experiencing physical or economic hardships.

7. Programs for the Provision of Conservation and Rehabilitation of Existing Neighborhoods

- a. "Upon the update of the community area plans (including the Tahoe Basin), study community housing conditions utilizing "windshield" surveys based on specific standards; review of 1985 census data; or on other types of surveys to identify specific neighborhoods or structures in need of rehabilitation or replacement. The study will generate a community map of those areas eligible for Federal and State rehabilitation grants or aid. The study will also identify potential sites for redevelopment projects."

Evaluation: A "windshield" survey of community housing conditions was done as part of the Affordable Housing Task Force Study and is included in this document as Appendix E. Areas in need of rehabilitation were identified.

- b. "Development applications requiring rezoning and general plan amendments will be reviewed with community area plans and the Long Range Land Use Plan policies. If the requested amendments propose new uses that are incompatible with the existing residential neighborhoods, staff will review the application for the appropriateness of the request."

Evaluation: All rezoning and general plan amendments have been reviewed for their conformance with the policies of the community area plans and the Long Range Land Use Plan. Proposals incompatible with those policies have not been approved for development.

8. Programs for the Provision of Appropriate Jobs/Housing Ratios

- a. "Continue to support existing ordinances which allow mixed-use zoning by right in Commercial and Industrial zone districts. New major industrial and commercial development will be encouraged by the County to provide units for employees. The County will request that employee housing be addressed in the Environmental Assessment/EIR for any major industrial and commercial development."

Evaluation: Since 1984, the County has had no applications for any "major" industrial or commercial developments. Employee housing has not been addressed in any Environmental Assessment/EIR thus far but will be should such a development be proposed. The County continues to support existing ordinances which allow mixed-use zoning by right in Commercial and Industrial zone districts.

- b. "When rezoning for major industrial and commercial developments occur, an adequate amount of land adjacent or part of the parcel(s) in question will be zoned for multi-family or high density residential development."

Evaluation: As mentioned above, no applications for any "major" industrial or commercial developments have been submitted during the life of the 1984 Housing Element. The County does currently have four major industrial and/or commercial areas, and a review of these areas shows the following opportunities for affordable employee housing:

The Barnett Ranch Business Park is contiguous to lands zoned Multi-Family and R1A (Single Family Residential, one acre minimum). Additional land is being amended to a Multi-Family designation.

The El Dorado Hills Business Park borders land zoned for Multi-Family, Single Family Residential and Single Family Residential - one acre minimum.

The Park West Business Park in Diamond Springs is adjacent to lands zoned for high density parcels from 20,000 square feet to one acre in size. It also borders a mobile home park. While not directly adjacent to the Business Park, land zoned for Multi-Family residential use is within one-half mile.

Another large area of industrial/commercial land is also located in Diamond Springs on Mother Lode Drive close to the intersection with Greenstone Road. This area borders land zoned for single-family residential use.

9. Participation in Housing Programs by Responsible Agencies

- a. "A representative from the County Service Districts (EID, fire districts, schools districts. etc.) should be appointed to the Housing Advisory Committee."

Evaluation: A representative from the El Dorado Irrigation District is currently a member of the Affordable Housing Task Force (refer to Appendix C for a list of the members of the Task Force).

10. Programs to Encourage the Construction of Rental Housing

- a. "Local government will monitor the conversion of rental units to condominiums or stock cooperatives. If the rate of conversion is adversely affecting the rental housing market, local government will adopt an ordinance regulating such conversions."

Evaluation: A draft ordinance regulating the conversion of rental units to condominiums or stock cooperatives is being prepared by the County.

- b. "The County will work with the Sierra Planning Organization and HCD to maintain a list of funding programs available to non-profit and private developers who wish to construct rental units."

Evaluation: The Sierra Planning Organization has maintained this list and kept it current during the life of the 1984 Housing Element. The information has been provided to those who have requested it.

- c. "Density bonuses will be awarded to those developers constructing rental housing units that are targeted towards groups with low to moderate incomes. One bedroom and studio units will be treated as equivalent to 75 percent of a housing unit when computing allowable density provided that the maximum number of units permitted on the site shall not be increased by more than 25 percent."

Evaluation: Only one senior housing project applied for the use of a density bonus. A new density bonus program is contained in the Housing Element.

- d. "County will request that developers utilizing State or Federal funds for the construction of rental units notify the County as to which program the developer is operating under so that staff may monitor the frequency of subsidized projects. A list of those projects will be kept on file in the Planning Department, and be used for referral purposes for other interested developers."

Evaluation: No rental units have been constructed using State or Federal funds within the unincorporated County of El Dorado during the effective period of the last Housing Element (1984 to 1992). An 80 unit project proposing use of Federal funds was approved in 1993. Fifty percent of the units will be designated for the elderly and ten with handicap accessibility.

- e. "While the General Plan designates most available sites for multi-family housing, there is no assurance that the production of rental units will occur. To insure that the availability of rental units occurs, the County will provide density bonuses of up to 25 percent for Planned Unit Developments (PD) in which at least 20 percent of the units will be offered for rent and will remain so for at least a five-year period."

Evaluation: Although the County has a density bonus program in place, it did not result in the development of low- to moderate-level priced rental housing. Only one project identified attempted to make use of the density bonus. This proposal was later redesigned and resubmitted without the use of the bonus and was eventually withdrawn. As was noted above, a new density bonus program appears in the Housing Element.

Summary

Effectiveness of the Element: A review of the 1984 Housing Element Program Evaluations demonstrates that the principle reason for the lack of implementation of many of the programs was, as indicated in the Affordable Housing Task Force Study, the lack of an individual agency or non-profit corporation with a mandate to produce housing units affordable to the majority of El Dorado County residents. The creation of the Affordable Housing Task Force was the first step in the remedy of this situation. The recent establishment of a Public Housing Authority will increase the effectiveness of the Housing Element.

Another difficulty in implementing the programs was due to the high turnover of personnel experienced by the Planning Department during the life of the 1984 Housing Element including four Planning Directors in the past five years. With the high turnover rate of planners working in the Department, very few ever had the opportunity to become familiar with the programs in the Housing Element, let alone begin their implementation.

Progress in Implementation: A review of the programs in the 1984 Housing Element shows that those programs requiring changes within the structure of the Planning and Building Departments were, for the most part, implemented. Programs such as the computerization of the departments, the opening of the Permit Center, and the implementation of the Master Plan Process have all been implemented and have greatly streamlined the planning and building process.

However, those programs offering incentives to the development of affordable housing, or those programs requiring an interface between planners, other County staff, and developers have for the most part not been initiated. Although incentives such as the density bonus were offered, affordable housing units were still not produced. Other programs such as public information workshops with the Sierra Planning Organization or creation of a forum to explore the formation of non-profit housing cooperatives did not get implemented due to a shortage of staff and the turnover of personnel at the leadership level.

Appropriateness of Goals, Objectives, and Policies: The creation of a quasi-public non-profit housing corporation will be the main thrust of the programs of the 1993 Housing Element. The County, working in cooperation with the Affordable Housing Task Force and the Economic Development Corporation, is currently developing a job description for a position to coordinate with the various government entities and implement housing programs. The County has committed \$100,000 in matching funds to establish a non-profit housing corporation. As discussed above, the County Board of Supervisors has authorized the establishment of a Public Housing Agency. The creation of this agency will place a clear priority on the development of affordable housing units and will supply the necessary leadership to ensure that the programs in this Housing Element receive full attention and implementation.

THE TAHOE BASIN

Introduction

Although the Housing Element is intended to apply to the County as a whole, unique physical and social characteristics inherent to the Lake Tahoe Basin create many special housing conditions. The purpose of this analysis is to provide an overview of those characteristics, identify the special needs of the area, and constraints that exist to meeting those needs. Because most of the area's population reside and work within the City limits of South Lake Tahoe, many of the housing issues identified with the city can be expanded to reflect the unincorporated areas of the East Slope of the County as well.

Tahoe Regional Planning Agency

In 1990, Congress, recognizing the public interest in protecting, preserving, and enhancing the unique environmental attributes of the Basin, revised the Two-State compact and created the bi-state Tahoe Regional Planning Agency (TRPA). TRPA was established to enhance the efficiency and governmental effectiveness of planning within the region. The Agency was mandated with

the power to establish environmental threshold carrying capacities and to adopt and enforce a regional plan to guide future growth of the Tahoe Basin. The Regional Plan for the Lake Tahoe Basin was adopted in 1986 and revised in April 1989.

Housing and the Regional Land Use Plan

While the Compact does not specifically mandate that a regional housing provision be included within the plan, the States of Nevada and California require housing to be addressed as an element of the General Plan for each of the cities and counties within its jurisdiction. TRPA included a Housing Supplement to briefly address regional housing issues within the its Regional Plan leaving the specific implementation to the local governments. Adequate implementation of the plan depends on the cooperation of all jurisdictions within the Basin.

The purpose of the Housing Supplement is to assess the housing needs of the Region and to make provisions for adequate housing. The Compact does not specifically mandate this Supplement nor do the environmental thresholds address this topic.

The Regional Plan for the Lake Tahoe Basin provides the following pertinent goals and policies:

Goal #1:

To the extent possible, affordable housing will be provided in suitable locations for the residents of the region.

Policies:

1. Special incentives, such as bonus development units, will be given to promote affordable or government-assisted housing for lower income households (80 percent of region's median income) and for very low income households (50 percent of the regional's median income).
2. Local governments will be encouraged to assume their "fair share" of the responsibility to provide lower and very low income housing.
3. Facilities shall be designed and occupied in accordance with local, regional, State, and Federal standards for the assistance of households with low and very low incomes. Such housing units shall be made available for rental or sale at a cost to such persons that would not exceed the recommended State and Federal standards.
4. Affordable or government assisted housing for lower income households should be located in close proximity to employment centers, government services, and transit facilities. Such housing must be compatible with the scale and density of the surrounding neighborhood.

Existing and Projected Housing Needs

As a major summer and winter recreation resort, the Lake Tahoe region experiences many housing problems associated with high seasonal migration. For example, the 1980 Census estimated that 21.7 percent of the population was employed in the gaming industry. Wages associated with this group are generally at the minimum wage level. Coupled with the artificially high price of year-round rental units, these factors compound to develop conditions leading to overpayment, overcrowding, and the dilapidation of units. Table 4-23 provides a summary of the existing housing needs as defined within the 1990 Census and historical documents.

1. Overpayment

Between 75 to 100 percent of Basin renter households and 70 to 80 percent owner households were experiencing problems of overpayment in 1990. A 20 percent greater incidence of overpayment occurs in the Tahoe Basin. Scarce year-round rental units, the abnormal inflation of rental prices caused by transit demand, and high fuel costs compound this problem.

2. Overcrowding

Overcrowding may occur voluntarily; however, it occurs more frequently when affordable housing cannot be found. Overcrowding is closely related to the condition of the structure since it subjects housing units to more intensive use. This, in turn, leads to premature deterioration. Consequently, overcrowding is a symptom of an inadequate supply as well as a contributory cause of substandard housing. According to the 1990 Census, about five percent of all occupied units were experiencing overcrowding (more than 1.01 persons per room) to some degree.

3. Condominium Conversions

Like other areas of the County, the conversion of apartment units to condominium units offered for sale in the Tahoe Basin creates many problems. One problem is displacement which primarily affects lower income, disabled, or elderly households. These groups are often less mobile and have extreme difficulty finding adequate rental housing elsewhere if they are either unable or unwilling to purchase condominium units. In addition, the decrease in construction of apartments contributes to the problem. On the other hand, as the price of single family residences continues to climb, lower priced condominium units become one of the few alternatives to low and moderate income households or first-time home buyers.

Presently, El Dorado County as a whole is not experiencing any significant trends toward condominium conversions. There appears to be a substantial interest in conversion within the Lake Tahoe Basin; however, an existing moratorium on all new subdivisions by the regional agencies has prohibited these potential conversions. Recent amendments to the TRPA regulations will allow certain conversions where there is no increase to the amount of land coverage from the existing structure. In addition, the City of South Lake Tahoe presently prohibits all condominium conversions within the City due to its impact on the available rental market.

4. Other Groups with Special Needs

Housing problems in the Tahoe Basin specifically affect certain low income households types. Families in this situation include:

- a. The elderly;
- b. Low wage casino employees;
- c. Low wage service employees;
- d. Welfare recipients; and
- e. The unemployed.

The elderly, living on fixed incomes, can be severely impacted by inflation. Many elderly households without any ability to increase their income levels and/or without a substantial retirement income face increased overpayment problems as well as the inability to compete for standard housing.

Low wage casino and service employees are probably the most visible group experiencing housing problems by virtue of their low incomes and lifestyle. For years, the California side of the south shore provided housing for casino employees, however, this situation has been changing with the expansion of the casinos in the past few years. This situation has increased the burden on the Nevada counties to bear their fair share of housing for the employees of the gaming industry. (For further information, see the Gaming Impact Study, TRPA).

The unemployed, welfare recipients, and female heads of household also experience problems in the Tahoe area. Because of their income level, they are and will continue to be hard pressed to find decent and affordable shelter. Approximately 48 percent of the households in the County are headed by females with children under 18 and reside in the Tahoe Basin. (U.S. Census of Population)

5. Unsuitable for Habitation

At the same time the need for adequate housing is increasing, the South Tahoe Basin is beginning to experience an overall decline in the condition of its existing housing stock. A large number of units are more than 15 years old, the age when structures begin to develop problems which, if not corrected, can lead to further deterioration. In addition, many housing units were originally built as summer cabins and are often substandard for year-round habitation.

Based upon the most recent Housing Survey (1971), the Tahoe Basin had nearly 747 single family units which should be classified as deteriorating; 185 units were determined to be dilapidated and in need of reconstruction. The significant fact is that about 89 percent of these units are located on the south shore within El Dorado County, particularly the City of South Lake Tahoe.

6. Constraints to Meeting the Housing Needs

Housing construction in the Tahoe Basin is dictated by the TRPA Regional Plan. The intent of the plan is to keep new development from locating on environmentally sensitive lands within the Basin. Limits on allocation of development, land coverage, density, and vehicle miles traveled as well as pollution mitigation fees mandated by the Regional Plan along with the dynamics of building moratoriums combine to exacerbate the typical constraints of land costs, permit fees, infrastructure fees, profit margin, market demand, etc., that create hurdles for affordable housing elsewhere. There is no current information on the condition, price, and availability of housing in the County lands in the Basin.

Under the Regional Plan, an annual allocation system meters 300 residential development rights Basin-wide to the various jurisdictions based on a complicated formula of vacant lots, water quality improvements, and other factors. El Dorado County and the City of South Lake Tahoe each receive approximately 100 residential allocations annually. Due to demand and a limited amount of appropriately zoned land, the County allocations have been reserved exclusively for single family dwellings. (The current applicant list will last approximately two years). The program also limits each person to one allocation per year. A duplex project would require the purchase and transfer of an allocation from another property. This is problematic because current County rules prohibit transfer of new allocations from one property to another. However, the City of South Lake Tahoe annually sets aside 50 percent of their allocations for multi-family construction. Demand for these allocations is not as brisk as for single family dwellings, but none go unused at year's end. The end result is that the City expands its housing mix to include multifamily dwellings annually. These usually take the form of duplexes and triplexes, but an occasional small apartment is built. El Dorado County should consider modification of the current allocation distribution process to a similar program based on other constraints and local needs.

NOTE: The TRPA waives the need for building allocations for projects that meet State and Federal affordable housing criteria.

Once an allocation is awarded to a property, residential development is based upon parcel specific land capability with respect to the potential for erosion and sedimentation (commercial development is similarly restricted and also subject to allocation). The system restricts the amount of land coverage (any impervious surface that causes runoff) to a maximum of 30 percent that can be placed on any parcel. The predominantly small lot sizes created by subdivision activity in the late 1960s for vacation residences presents a tremendous constraint to building multi-family dwellings in light of coverage limitations. The cost to obtain a land base of suitable land capability large enough to construct a duplex (and associated parking areas), much less an apartment, is prohibitive. The demand for high capability property for single family construction drives the price of such land out of the reach of a project's budget even where zoning allows such uses. Additionally, the plan severely limits the amount of land where multi-family dwellings are allowed.

El Dorado County has a limited amount of high capability land zoned for multi-family use in the Meyers area. The Meyers Community Plan (Plan Area #125) currently under consideration designates three parcels (approximately one acre) for multi-family residential use. A nearby Plan Area (#136) allows "Employee Housing" to 15 dwelling units per acre, but little land of suitable capability exists within the plan area to support such a density. Similarly, Plan Area #116 has a similar designation but has low land capability. However, this area may be subject to reclassification due to past land uses. The Plan Area amendment and land classification processes could be utilized to change these designations to allow higher densities. **NOTE:** The Regional Plan allows density bonuses of up to 25 percent for projects that meet State and Federal affordable housing criteria. This could provide added incentive when combined with the allocation waiver described previously.

The Regional Plan seeks to reduce air pollution by limiting vehicle miles traveled (VMT). A common method is to locate housing near employment centers. The City of South Lake Tahoe provides the logical location for housing to attain VMT reductions particularly the Stateline area. County jurisdiction lands mentioned previously are five to nine miles from the Stateline area. This may present constraints to development of large scale projects in the County but not to duplex and triplex projects. It may be an issue when seeking a plan area amendment.

TRPA assesses a series of pollution mitigation fees for air and water quality impacts of residential development that can result in a total of \$4,750 for a 2,000 square foot home and \$12,375 for a six unit apartment. This is a significant cost that also effects the affordability equation.

A moratorium on residential construction was in effect from 1983 until 1988 while the Regional Plan was established and sewage treatment capacity was enlarged. This resulted in a release of pent up demand for single family dwellings for both year-round residential and vacation use that continues to this day. The moratorium also resulted in many illegal conversions of single family dwellings to multi-family dwellings. The local sewer utility has complicated this situation by accepting post payment of hookup and service fees from property owners upon discovery of such additions (kitchen and bathroom). This has resulted in legitimization of these units in the eyes of the property owners even though the notice letter specifically states that this payment does not constitute land use approval of the use by the local jurisdiction. The El Dorado County Building Department receives a copy of these letters. However, no action has traditionally been taken to permit such conversions or additions other than a cursory external look. Not only do these conversions violate the building and zoning codes, the County is potentially subject to liability and a loss of fee and tax revenues. Further, when the Assessor discovers such units, they are subject to taxation; but no formal method exists to notify the building department. The end result is a proliferation of potentially unsafe housing that is not subject to adequate inspection.

The lack of an up-to-date County housing survey that details costs, condition, and availability poses planning constraints. A windshield survey was conducted in 1990, but no cost or availability data were collected at that time. The trend appears to favor new construction that results in prices of \$190,000 and up due to the profit that must be realized from up-front costs of building that can be as much as \$40,000 prior to driving the first nail. However, this must be quantified through a survey to be useful. An opportunity may exist to prepare a joint study with the City of South Lake Tahoe.

Affordable Housing Demonstration Program

The TRPA Advisory Planning Commission has considered code amendments that would permit a demonstration program for the construction of an affordable housing project by each local government jurisdiction including the City of South Lake Tahoe and the unincorporated area of El Dorado County. The Commission referred the item back to staff for further analysis. To date, this item has not yet been brought back to the Commission.

The primary hurdles are the need for TRPA code amendments that provide for a housing demonstration program itself and more importantly to allow an increase of allowable lot coverage. Increases in allowable coverage require an amendment to the 208 Water Quality Plan including approval by the U.S. Environmental Protection Agency because this would represent a substantial modification to the plan. Recent priorities set by TRPA do not include staff time for such amendments due to budgetary constraints and a feeling that sufficient allowances have been made to date regarding incentives for affordable housing.

Summary

The housing problems that exist within the Basin are not easily solved. The limited land available for residential development, infrastructure constraints, and public sector regulation compound the existing problems of overpayment, overcrowding, and unit deterioration. The County will continue to support the City of South Lake Tahoe and work with TRPA to achieve the goals identified in the Housing Supplement of the Regional Land Use Plan.

TABLE 4-24
SUMMARY OF EXISTING HOUSING NEEDS

	South Lake Tahoe	Placerville	304.02	305.01	305.02	305.03	West Slope	Total County
Population	21,586	8,232	3,890	4,492	2,479	909	97,175	125,995
Median Household Income	\$28,727	\$31,019	\$27,500	\$42,107	\$38,964	\$37,500	N/A	\$39,823
Renter/Owner Occupied			2,240/1,592	1,269/3,164	697/1,782	487/407		
Overpayment %								
Groups with special housing needs - % of population								
y Disabled								
Elderly								
Poverty status or below								
Seasonal workers								
Families with single female heads of households								
Overcrowding			91	36	23	22		
Housing condition								
Rentals								
Seasonal								
Lacks plumbing for exclusive use								

NOTE: Missing information has been recalled by the Bureau of the Census.

Source: 1990 Census

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PUBLIC SERVICES AND UTILITIES

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Chapter 5

PUBLIC SERVICES AND UTILITIES

PROVISION OF PUBLIC SERVICES

The following sections focus on water, sewer, and drainage infrastructure in El Dorado County and the provision of important public services such as schools, libraries, police, fire, etc. The purpose is to describe public service facilities in size and location ability to meet existing demands, excess capacity or deficiency, expansion potential, and overall system capability in context of demand forecasts of the General Plan.

Water Supply

Water, its availability, reliability, and quality is essential to support the environment, life styles, and projected population growth of El Dorado County. It is essential for the County's agricultural operations, it is needed to provide municipal and domestic service (including fire protection) to existing and future County residents, and it is also critical to provide for additional beneficial uses such as recreation and wildlife habitat.

Water in El Dorado County comes primarily from surface water resources and, to a lesser degree, from groundwater sources. The County has four major watersheds drained by the Middle Fork of the American River, the South Fork of the American River, the Cosumnes River, and the Lake Tahoe Basin. The major rivers running through El Dorado County are the American and Cosumnes rivers, both with numerous major and minor tributaries. A rapidly expanding population and economy exert increasing pressure on the County's water supply.

Administratively, the responsibility for water supply within the County is somewhat fragmented. The El Dorado County Water Agency, created by an act of the California Legislature in 1959, has County-wide authorities but is not a water purveyor. The stated principle role of the El Dorado County Water Agency, as adopted on October 16, 1989, is to procure an adequate supply of water to serve all beneficial uses by the lands and citizens of the County and to ensure that this supply can be delivered to water users via the County's water purveyors. However, there are five primary water purveyors in El Dorado County, all of which are independent public entities, collectively holding jurisdiction over and responsibility for service to approximately 20 percent of the land area of the County. These are:

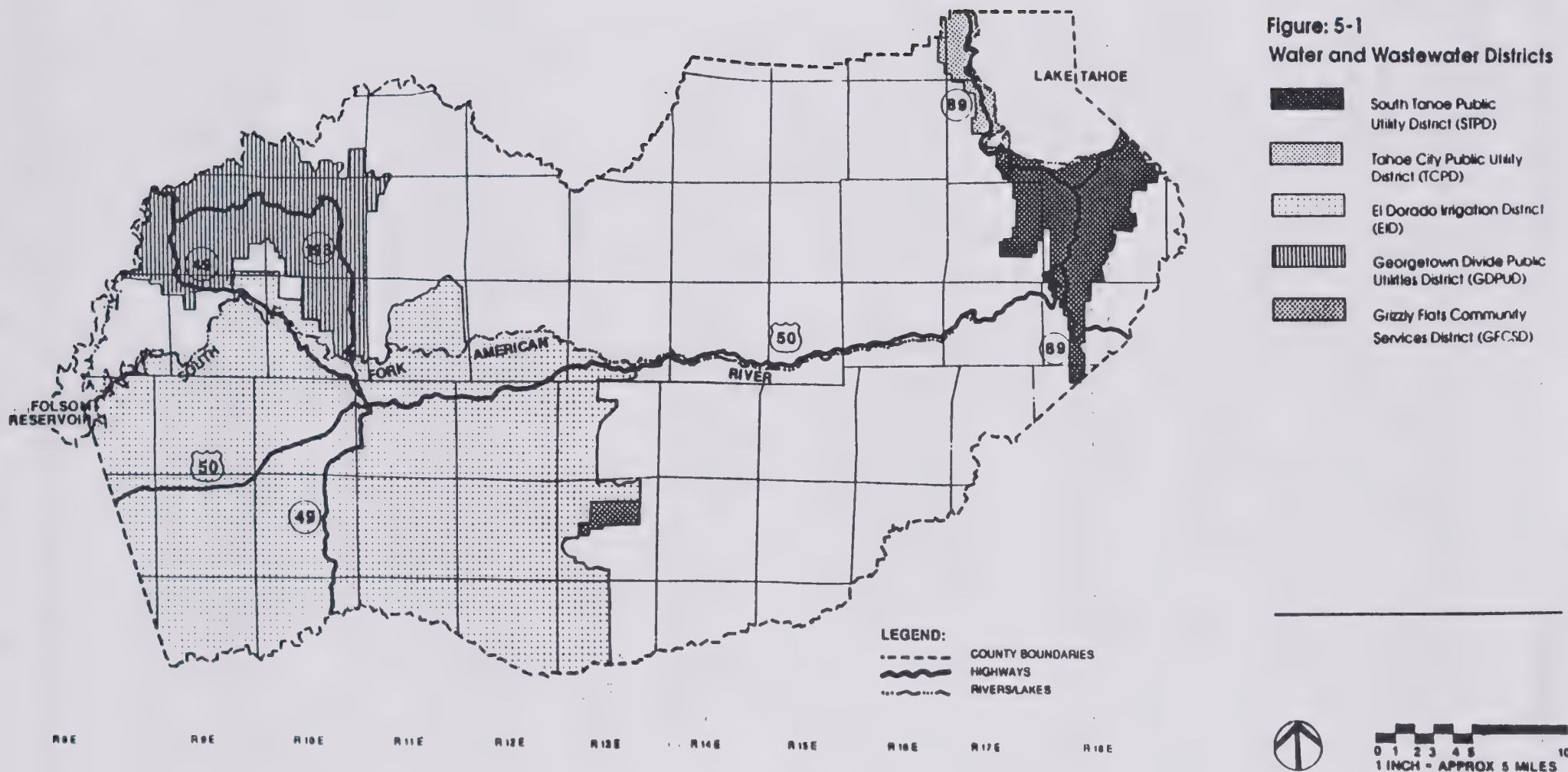
- El Dorado Irrigation District (EID), including:
 - Primary (contiguous) Distribution System;
 - City of Placerville Sub-system;
 - Outingdale Water System;
 - Strawberry Water System;
 - Swansboro Water System;
 - Monte Vista Water System; and,
 - Ditch (non-potable) Systems.
- Georgetown Divide Public Utility District (GDPUD);
- Grizzly Flats Community Services District (GFCSD);
- South Tahoe Public Utility District (STPUD); and
- Tahoe City Public Utility District (TCPUD).

TABLE 5-1
PURVEYOR DISTRICT LAND AREAS

Area	Square Miles	Acres	Percent	Percent Non-USFS
County	1713.00	1,096,320	100.00	
USFS	652.26	417,448	38.08	
NON-USFS	1060.74	678,872	61.92	100.00
EID	218.75	140,000	12.77	20.62
GDPUD	117.19	75,000	6.84	11.05
STPUD	27.66	17,700	1.61	2.61
TCPUD	1.09	700	0.06	0.10
GFCSD	1.72	1,100	0.10	0.16
Unaffiliated	694.33	444,372	40.53	65.46
Source:				

EL DORADO COUNTY GENERAL PLAN

Figure: 5-1
Water and Wastewater Districts



Spheres of Influence for the public purveyors have been suggested by the Local Agency Formation Commission (LAFCO) which, if implemented, would approximately double the extent of public purveyor responsibilities. However, the public purveyors are self governing with responsibilities only to lands within their existing boundaries. Therefore, designation of Spheres of Influence does not create any obligation to provide services. Responsibility to serve lands outside purveyor boundaries is therefore undefined except to the extent it resides and is acknowledged by the County of El Dorado or the El Dorado County Water Agency. Groundwater resources available to these lands are uncertain problematic.

EID is the largest water purveyor in the Western Slope, in terms of area served, followed by the GDPUD and GFCSD; STPUD serves El Dorado County in the vicinity of South Lake Tahoe; and TCPUD serves a portion of El Dorado County north Emerald Bay in the Tahoe Basin. In addition to the public facilities owned by EID, GDPUD, GFCSD, STPUD, and TCPUD, there are 49 private systems operated within the Western Slope of the County, and 89 private systems operated within the Tahoe Basin. The remainder of the County is undeveloped in terms of water distribution systems of more than 200 connections. The small, private water distribution systems in El Dorado County are regulated by the County Department of Environmental Management; however, the purveyors with water distribution systems serving more than 200 connections are regulated by State agencies and governed by locally elected Boards of Directors responsible to the voters within District boundaries. Thus, large areas of the lands within the County are represented in water matters only by the El Dorado County Water Agency which is not a water purveyor and exercises no formal control over purveyor activities. Future service to these lands is somewhat problematic with no infrastructure planning presently in place.

In addition to the primary purveyors, the City of Placerville operates a water treatment and distribution system serving a portion of the lands within the City and relying upon water purchased wholesale from EID.

El Dorado Irrigation District

EID was formed in October 1925 to provide public water service to the City of Placerville as well as domestic and irrigation water to local agricultural customers. Today, EID's major water service area encompasses approximately 139,000 acres in the western portion of the County, primarily south of the South Fork American River. The elevation across the service area ranges from approximately 500 feet above mean sea level (feet msl) on the west edge to approximately 4,000 feet msl on the east edge. The largest of the three public water purveyors, EID serves treated water to residential and commercial land uses, treated and untreated water to agricultural land uses.

The Sphere of Influence established for EID by the Local Agency Formation Commission (LAFCO) encompasses approximately 347,000 acres. The Sphere of Influence is generally bounded on the north by the South Fork American River, on the south by the South Fork Cosumnes River, on the east by the Eldorado National Forest, and on the west by the El Dorado County/Sacramento County line.

The El Dorado Irrigation District water system is made up of a primary system serving the majority of EID customers plus several small systems serving the communities of Outingdale, Swansboro, Strawberry, and Monte Vista. All water used in the primary system of EID is diverted from surface supplies. Currently (1993), EID has four sources of water supply which is summarized on Table 5-2. These supplies are PG&E's El Dorado Forebay, U.S. Bureau of Reclamation's Sly Park Reservoir and Folsom Reservoir, and EID's Crawford Ditch.

- The maximum annual delivery and firm yield from the El Dorado Forebay, in accordance with EID's contract with PG&E, is 15,080 acre-feet. Water from El Dorado Forebay flows into EID's distribution system via the EID Main Ditch. A small percentage of the water is pumped east to supply water to Pollock Pines, Lakewood Sierra, Gold Ridge, and Fresh Pond.
- The maximum annual yield from Sly Park Reservoir, in accordance with EID's contract with the Bureau of Reclamation, is 23,000 acre-feet. The corresponding firm yield from the project is 18,500 acre-feet per year.
- The maximum annual pumpage from Folsom Reservoir, in accordance with EID's contract with the U.S. Bureau of Reclamation, is 7,550 acre-feet. The corresponding firm yield is 5,600 acre-feet per year. However, the current capacity of the El Dorado Hills Water Treatment Plant limits annual pumping to 4,000 acre-feet. In addition, plans are underway to expand the El Dorado Hills Treatment Plant capacity.
- The Crawford Ditch diverts water from the North Fork Cosumnes River (North Fork Ditch) and is also supplied water released from the Sly Park Reservoir by rediversion from Clear Creek. Improvements to sections of the Crawford Ditch system were completed by EID in 1991. Prior to the improvements, the expected yield from the ditch was estimated at 700 acre-feet annually. According to the evaluation prepared by EID for the final Environmental Impact Report for the Crawford Ditch improvements, an increase in available water supply of 2,800 acre-feet annually was anticipated. However, the present firm yield is now 0-acre feet per year (pending resolution of legal challenge).

Recently, EID and the County Water Agency have completed water demand forecasts showing that the present water supply from existing sources currently exceeds demand. The estimated water demand for 1993 is 35,100 acre-feet, approximately 2,300 acre-feet less than the present firm yield of 37,400 acre-feet as shown in Table 5-2. EID estimates that demand will likely exceed supply by 1997 unless additional sources are developed.

The primary water transmission and distribution system is shown on one large-scale map available for review at the El Dorado County Planning Department. The system map shows only pipes of ten-inch size and larger. Some eight-inch pipes were included to retain system continuity. This system was modeled with a hydraulic analysis computer program to aid in the determination of system capacity and to help predict the impacts of future development on the

system. The El Dorado County Local Agency Formation Commission (LAFCO) maintains a large-scale map showing water districts, spheres of influence, and service area boundaries. The El Dorado County Planning Department keeps an updated version of this map on file for public review.

EID's 1993 water supplies provide 37,400 acre-feet firm yield annually. The total annual water demand projected for the year 2010 within the EID sphere of influence, including domestic, commercial, and agricultural uses, as well as system losses, is estimated to be approximately 52,014 acre-feet. (This number represents the amount of water demanded by the development which is projected to occur within the time frame of the General Plan.) The difference between existing water supply and projected demand to the year 2015 is 14,614 acre-feet.

The County Water Agency and EID have jointly filed applications to secure water rights with the State Water Resources Control Board (SWRCB) to cover about 33,000 acre-feet of water supply in the El Dorado Project (a hydroelectric power generation project owned and operated by Pacific Gas & Electric). The estimated safe yield of annual water supply from this source is 17,000 acre-feet and could be delivered to the EID service area through existing facilities or via the proposed White Rock Project. Water from the White Rock Project is anticipated to be available in 1997; however, if the water rights are granted earlier, the new water could be utilized by the district through diversions on PG&E's El Dorado Canal by 1994. The White Rock Project includes a penstock diversion pipeline from SMUD's White Rock Penstock to a water treatment plant at Bray Reservoir near Diamond Springs and a pipeline from the treatment plant for distribution to serve western El Dorado County. The County Water Agency is pursuing a water supply service contract with the U.S. Bureau of Reclamation which would supply an additional yield of 5,625 acre-feet and could be available as early as 1994. These new water supply sources currently pursued by EID and the County Water Agency total 22,625 acre-feet. Therefore, it is highly probable that an adequate water supply will be available to serve the County's projected growth in the EID service area.

TABLE 5-2
EXISTING AND PROPOSED WATER SOURCES, EID

Source	Entitlement (AF/Y)	1993 Firm Yield (AF/Y)
Sly Park Reservoir	23,000	18,500
Forebay	15,080	14,326
Folsom Reservoir	7,550	5,600
Crawford Ditch		0
Additional Sources		
El Dorado Project		17,000
USBR Service Contract		5,625
TOTAL		60,025

Source: *El Dorado County Water Agency, 1993*

The preferred operating mode of the primary system is by gravity. Water flows from Forebay and Jenkinson Lake westward (downslope) toward the western portion of the service area. Water supply from Folsom Reservoir can be pumped to the El Dorado Hills area and as far east as Cameron Park. This system is operated to meet summer peaks and to reduce demands upon Sly Park.

Sly Park Reservoir (Jenkinson Lake). EID is entitled to withdraw 23,000 acre-feet annually from Sly Park Reservoir. Water flows through a 48-inch pipe from the dam to Reservoir A. Reservoir A is a concrete-lined, uncovered storage facility used for alum-floc settling. At Reservoir A, additional chemical facilities (lime and chlorine) were constructed in 1975. During 1990, an 80 cubic feet per second (cfs) pressure filtration facility was constructed. From Reservoir A, approximately 70 percent of the water is diverted northwest into Reservoirs Nos. 2 and 2A of the El Dorado Forebay subsystem via the Camino Conduit. The remaining water from Reservoir A flows southwesterly via the Pleasant Oak Main. Water flowing in the Pleasant Oak Main then passes through Reservoirs B and C where chlorine is added to maintain an adequate residual. Water leaving Reservoir C flows westerly and enters Reservoir No. 7 where pressure filtration, alum, and lime addition facilities are located. New pre-treatment facilities that include flocculation and sedimentation are provided for water entering from the Crawford Ditch. The present capacity of the pressure filters is ten cfs. Leaving Reservoir No. 7 and entering the Diamond Springs Main, the flow passes through Reservoir No. 8. At Diamond Springs, the State Route 49 Intertie connects into the Diamond Springs Main. Branching just west of this intertie, Lateral 3.6N runs northwestward, serving the areas of Sundance Lane, Green Valley Acres, and Greenstone while the Diamond Springs Main continues westward to Reservoir No. 9. Lateral 3.6N connects to the Gold Hill Intertie near the west end of the Greenstone Country Subdivision. From Reservoir No. 9, a 12-inch main branches south along State Route 49 serving the Logtown area. The Diamond Springs Main continues west to Shingle Springs and Cameron Park. Leg A of the Gold Hill Intertie connects to the Diamond Springs Main at Cameron Park and can feed back to Shingle Springs to the Diamond Springs Main.

Forebay Supply. EID is entitled to withdraw 15,080 acre-feet of water per year from the PG&E El Dorado Forebay. Water flows from Forebay into the Main Canal. Water is pumped from just below Reservoir No. 1 by the Sportsman's pump station to supply Pollock Pines Reservoir, Lakewood Sierra, Gold Ridge, Fresh Pond, and Pollock Pines. The remainder flows through the Main Canal to Reservoir No. 1. There, up to 40 cfs are diverted and treated. After Reservoir No. 1, the flow divides into two pipelines and a ditch. The water in the ditch serves agricultural customers only. El Dorado Main No. 1 and the Moose Hall Pipeline begin at Reservoir No. 1 and carry water to Reservoir Nos. 2 and 2A via the Sly Park Intertie. As the water leaves the reservoir, chlorine is added; and the flow enters El Dorado Mains Nos. 1 and 2. The El Dorado Mains continue westward, carrying water from Camino through Placerville into the Gold Hill area. Prior to reaching Gold Hill, three major reservoirs (Nos. 3, 4 and 5) are situated along the El Dorado Mains. Chlorine is injected at each of these reservoirs to maintain adequate residuals. Treated water may be pumped via the Sly Park Intertie from Reservoir A to Reservoir 1. The Sly Park Intertie was constructed in the late 1970s to transfer water from Forebay to Sly Park during the 1976-77 drought.

At Reservoir No. 3, a lateral from El Dorado Main No. 1 begins just northeast of Placerville and continues in a southerly direction around the southeastern edge of Placerville to Reservoir No. 6, then to Sacramento Hill Reservoir, and terminates in the Cold Springs region. This branch is known as the Sacramento Hill Lateral. The City of Placerville has two takeout points along this lateral that divert water to the Placerville and Sierra Water Treatment Plants. The State Route 49 Intertie connects the Sacramento Hill Lateral to the Diamond Springs Main at Diamond Springs.

During 1989, the Gold Hill Intertie was constructed to take some hydraulic burden off the Pleasant Oak and Diamond Springs mains. The Gold Hill Intertie connects to the termination of El Dorado Mains Nos. 1 and 2 and extends southward to serve Cameron Park and then westward to serve the El Dorado Hills area.

Folsom Lake Supply. EID is entitled to withdraw 7,550 acre-feet annually from Folsom Lake. Water is pumped from Folsom and treated at the El Dorado Hills Water Treatment Plant. The present capacity of the water treatment plant is 5.7 mgd. The plant is being expanded to 12 mgd with a final expansion to 20 mgd planned for the late 1990s. The El Dorado Hills plant serves El Dorado Hills, Lake Hills Estates, and the developing business park south of U.S. Highway 50 and can serve portions of Cameron Park.

Water Treatment, Storage, and Pumping Facilities. In total, the district has 54 separate water storage facilities throughout the district including open reservoirs and steel tanks. Additionally, the district maintains various separate pumping facilities to lift water through portions of the distribution system and to maintain pressure in areas of high elevation.

Planned Improvements. EID plans to develop new water supply sources (R.W. Beck & Associates, January 1989).

Alternative water supply projects that have been studied by EID are summarized in Table 5-3.

Regardless of which new supply source is developed first, the proposed Texas Hill Reservoir could be a key element for regulating consumptive use. The proposed Texas Hill Reservoir would be located south of Placerville near the geometric center of the district. Texas Hill Reservoir could regulate excess water from the Sly Park Reservoir routed through the Camino Conduit to Weber Creek. Any water EID may have in excess of its immediate needs at the existing El Dorado Forebay can be conveyed to Reservoir A through the Sly Park Intertie. Water could then be released from the Sly Park Intertie to the North Fork of Weber Creek and routed to Texas Hill. In addition, spring flows from the North Fork of the Cosumnes River, Camp Creek, and Clear Creek could be diverted through the Crawford Ditch system to Texas Hill Reservoir for additional storage. The proposed White Rock Penstock project could divert water to storage at the Texas Hill Reservoir also. Therefore, Texas Hill Reservoir would become the focal point for the possibility of storage water from a variety of sources.

**TABLE 5-3
ALTERNATIVE WATER SUPPLY PROJECTS, EID**

Water Supply Project	Estimated Firm Yield (AC/Y)
Texas Hill Dam and Reservoir	10,850
Small Alder Dam and Reservoir	11,250
Capps Crossing Dam and Reservoir with Baltic Tunnel	10,400
Capps Crossing Dam and Reservoir with Crawford Pipeline	11,700
White Rock Penstock Diversion to Gold Hill Intertie (10 cfs capacity)	3,400
White Rock Penstock Diversion to Bray Reservoir (100 cfs capacity)	34,000
Crawford Ditch Improvement	2,100
Squaw Hollow Dam and Reservoir	3,200
Sly Park Flashboards	1,000
Source: Robert Alcott, EID; Bob Reeb, El Dorado County Water Agency	

The proposed Bray Water Treatment Plant is another key element to EID's future water infrastructure. Its initial capacity would be 40 cfs, expandable to 120 cfs. Raw water could be drawn from Texas Hill Reservoir or the White Rock project and treated at the Bray Water Treatment Plant. The proposed Placerville Ridge Conduit would distribute water from the Bray Water Treatment Plant and would extend westward to the Town of El Dorado and continue to Shingle Springs, Cameron Park, and terminate at Bass Lake.

The future plan of operation for EID is to have the Bray Water Treatment Plant serve the western half of the district, including El Dorado Hills, for approximately eight months out of the year. During the four peak water use months, the El Dorado Hills Water Treatment Plant would treat its entire 7,500 acre-feet entitlement from Folsom Reservoir to serve the extreme western portion of the district while the Bray facility would serve the remainder of the western half. As for the eastern half of the district, the existing facilities at Reservoirs 1, A, and 7 would provide treatment.

Aside from the supply issue is the capability of the water piping system to meet maximum flow demands. Psomas and Associates, with cooperation from EID, has developed a system computer model to help predict the impacts of potential future development on the primary system infrastructure. The model features ten-inch and larger pipes, reservoirs, and pressure-reducing stations. Average day demand was obtained from EID. Flow demands will be modeled at key locations in the distribution system. Table 5-4 summarizes the estimated existing transmission line flow rates for average day, maximum day, and maximum hydraulic capacity. These flow rates were obtained from EID.

EID Satellite Systems Descriptions

Monte Vista. Raw water is supplied to the Monte Vista water system from Folsom Lake as part of the 7,500 AFA EID allocation. Water is withdrawn from the Lake by using two submersible pumps, one ten horsepower and the other 15 horsepower. Raw water is treated by a small water treatment plant and diverted to two storage reservoirs. The present annual water consumption of Monte Vista is 1.0 million cubic feet per year. System modifications are in progress to merge the Monte Vista system into EID's primary potable water system via a connecting pipeline.

Strawberry. Water is supplied to the developed areas from the South Fork of the American River. Raw river water is lifted by a 100 gpm/10 horsepower pump to a 50,000-gallon storage tank situated at 5,900 feet above mean sea level. A booster pump lifts water from this tank to another 25,000-gallon storage tank at 6,060 feet elevation. This second tank serves water to houses located in a second pressure zone. Presently, the water is treated by chlorination only. Present annual water usage for Strawberry is unknown because no meter or pumping records are presently kept.

Swansboro. Potable water is supplied by wells. One of the wells is located on Stope Drive and drilled to a depth of 250 feet. The well is equipped with a 40 gpm/five horsepower submersible pump. The other well in service is located on Cable View Court and drilled to a depth of 175 feet. This well is equipped with a 10 gpm/three horsepower submersible pump. The third well is on Dogwood Lane and is equipped with a ten horsepower submersible pump. Groundwater is pumped from all wells through six-inch to 12-inch diameter pipes to a 420,000-gallon reservoir located at the 3,100-foot elevation. A 90 gpm/five horsepower booster pump transfers water to a 120,000-gallon storage tank situated at 3,200 feet elevation. The current total well production is approximately 60 gpm. The district is drilling more wells to increase the total yield which is not adequate to serve the existing customers. Present annual water usage for Swansboro is approximately 2,215,000 cubic feet per year.

Outingdale. Water is pumped from the Middle Fork of the Cosumnes River to serve residential development in the area. One horizontal multi-stage pump with a capacity of 60 gpm lifts water from the river to a small treatment plant. The treatment process consists of polymer addition, sand filter, and chlorination. From the treatment plant, the finished water is transferred into an adjacent 44,000-gallon storage tank. Water is also lifted by a ten horsepower pump to a 120,000-gallon steel storage tank located in Riverside Estates. The district is planning to replace the river pump station and pressure filter in 1991. Present annual water use in Outingdale is 1.5 million cubic feet.

TABLE 5-4
EXISTING INFRASTRUCTURE CAPACITY, EID

	Existing Average Day (cfs)	Existing Maximum Day ¹ (cfs)	Maximum Hydraulic Capacity (cfs)
EDM 1	14	35	70
EDM 2	8	20	61
Pleasant Oak Main	11	27	30
Diamond Springs Main	9	22	33
Camino Conduit	16	40	68
Gold Hill Intertie	5	11	11
Outingdale ²		40 gpm	1,000 gpm ³
Strawberry ²		Unknown	1,000 gpm ³
Monte Vista ²		40 gpm	1,000 gpm ³
Swansboro ²		80 gpm	1,000 gpm ³
¹ Estimated ² Calculated ³ Fire flow requirement			

Georgetown Divide Public Utility District

The GDPUD was formed in June 1946. GDPUD's present service area encompasses approximately 75,000 acres in the western portion of the County north of EID and the South Fork American River. The elevation across the service area ranges from approximately 800 feet msl on the west edge to approximately 3,500 feet msl on the east edge. The GDPUD currently provides treated water to residential and commercial land uses and untreated water to agricultural and subagricultural land uses.

The LAFCO Sphere of Influence for the GDPUD encompasses approximately 173,000 acres. The Sphere of Influence is generally bounded on the north by the Middle Fork of the American River and the Rubicon River, on the south by the South Fork of the American River, extends east to Stumpy Meadows Reservoir, and west to Folsom Reservoir.

The Georgetown Divide Public Utility District infrastructure is made up of two water treatment plants and distribution systems: Auburn Lake Trails and the Georgetown-Buckeye systems. The Auburn Lake Trails System serves the communities of Cool, Pilot Hill, Greenwood, and the Auburn Lake Trails and Cherry Acres subdivisions. The Georgetown-Buckeye System serves the Georgetown, Garden Valley and Kelsey communities, and the Spanish Dry Diggins/Sliger Mine area. The District currently serves about 7,500 residents of the 9,900 residents within their Sphere of Influence.

GDPUD's existing water supply delivers a firm yield of 11,200 acre-feet. The present source of water for GDPUD is surface water from the Stumpy Meadows Project. The project was completed in 1962 with a Federal loan administered by the Bureau of Reclamation and has a storage capacity of 20,000 acre-feet at normal operating level. The major facilities for GDPUD's treated water system are contained within six subsystems including the Georgetown-Buckeye Water System, Garden Valley Water System, Garden Valley Water System Phase II, Kelsey Water System, Auburn Lake Trails Water System, and Pilot Hill Water System.

The diversion points for the GDPUD system include the main diversion structure on Pilot Creek below the reservoir, Otter Creek Diversions, and several diversion points along the El Dorado Conduit referred to as enroute diversions.

The El Dorado Conduit is the main conveyance system to the district. The El Dorado Conduit carries water from the Pilot Creek and enroute diversions and consists of approximately ten miles of pipeline, ditch and tunnel. The carrying capacity is approximately 50 cfs. The present maximum demand flow in the summer months is approximately 24 cfs. Of this number, approximately 20 cfs are sold for irrigation water; the remaining four cfs are the present maximum day demand for domestic use.

The present untreated water system distributes water through ditches and conduits to commercial farms and suburban agricultural use. Approximately 57 miles of ditch and pipeline currently provide about 5,000 acre-feet annually to approximately 450 agricultural customers. The district sells irrigation water by the miners-inch (11.25 gpm). The irrigation season spans a five month period from May through September.

The treated water distribution system consists of approximately 120 miles of piping, ranging in size from six inches to 12 inches. Present customer connections number approximately 2,700. The present total number of assessed parcels within the district is 2,968. This number could increase 3,800 if currently proposed improvement districts are approved. The district's distribution infrastructure consists of two systems: the Georgetown-Buckeye and Auburn Lake Trails systems.

Water for the Georgetown-Buckeye System is treated at a 3.0 mgd treatment plant located near Walton Lake. This system serves the communities of Georgetown, Garden Valley, Kelsey, and the Spanish Dry Diggins/Sliger Mine areas. This system operates primarily by gravity flowing down grade from east to west as far as the Auburn Lake Trails Plant.

Water for the Auburn Lake Trails System is treated at the 2.25 mgd Auburn Lake Trails Treatment Plant. Raw water supply is provided by the district's Main Ditch No. 2. The Auburn Lake Trails Plant serves the communities of Greenwood, Cool, Pilot Hill, and the Auburn Lake Trails, Cherry Acres, and Meadowview subdivisions.

Water treated at the Auburn Lake Trails Plant is pumped by 75 to 100 horsepower high-service pumps to storage and distribution. Because of the high operating costs of pumping, the district attempts to operate the Auburn Lake Trails Plant only in the summer months. The Georgetown-Buckeye Plant has sufficient elevation and capacity to serve the Georgetown-Buckeye and Auburn Lake Trails systems for the remainder of the year.

Water Treatment, Storage, and Pumping. The water treatment plants at Walton Lake and Auburn Lake Trails both use upflow clarifiers and mixed-media pressure filters. The clarifiers are bypassed, and the plants use direct filtration with the assistance of an organic polymer as a filter aid. The plants use both pre- and post-chlorination for disinfection.

The district maintains several small hydropneumatic pressure systems within the district in localized areas of high elevation. The main pumping station in the district is the high service pump station at the Auburn Lake Trails Water Treatment Plant as previously described. The district operates one five horsepower in-line booster pump in the Georgetown-Buckeye System to maintain system pressures under maximum demand conditions.

The district is presently capable of serving municipal water supplies to most communities on the Georgetown Divide (exceptions are Quintette, Volcanoville, and Camp Chiquita).

The district is studying the possibility of relocating the Auburn Lake Trails Plant to Greenwood Lake. Greenwood Lake is approximately 500 feet higher in elevation and would eliminate the need for high service pumping.

Finished water storage facilities within the district are summarized in Table 5-5.

TABLE 5-5 GEORGETOWN DIVIDE PUD WATER STORAGE FACILITIES	
Community Served	Storage Capacity (gallons)
Garden Valley/Kelsey ¹	770,000
Georgetown/Spanish Dry Diggins ²	1,360,000
Auburn Lake Trails ³	830,000
Cool/Pilot Hill	470,000
¹ Three tanks totaling 770,000 gallons ² Five tanks totaling 1,360,000 gallons ³ Four tanks totaling 830,000 gallons	

The Walton Lake Plant is scheduled for expansion sometime in 1996. The district is pursuing alternative water supplies including: Canyon Creek Dam and Auburn Dam; purchasing water from SMUD's Upper American River Project; a dam on the Lower South Fork of the American River below Coloma, in the vicinity of Salmon Falls Bridge; and is also studying the possibility of pumping water out of both the Middle and South Forks of the American River.

Summary of Capacity and Delivery Capability. The present combined maximum capacity of the district's water treatment facilities is 5.25 mgd (8.0 cfs).

The present average day demand of the district is approximately 1.0 mgd. When all of the assessed parcels, including Kelsey and Pilot Hill, are built out the average day demand will be approximately 1.7 mgd (2.6 cfs). Assuming a peaking factor for maximum day demand of 2.5, the maximum day demand when all assessed parcels are built out will be 4.3 mgd (6.6 cfs). This includes 0.25 mgd irrigation water for Auburn Lake Trails Golf Course.

Irrigation water demand for the district presently totals approximately 5,000 acre-feet per year for 425 services. The irrigation season lasts approximately five months out of each year from May through September. Based on a five-month irrigation period, the maximum irrigation demand is calculated to be approximately 20 cfs. The raw water delivery system from the Stumpy Meadows Reservoir to the GDPUD has an estimated capacity of 50 cfs.

The estimated total maximum demand is totalled in Table 5-6.

TABLE 5-6 GEORGETOWN DIVIDE PUD WATER DEMAND	
Irrigation Peak	20.0 cfs
Domestic Maximum Day	6.6 cfs
Losses (13 percent)	4.4 cfs
TOTAL	31.0 cfs

With an estimated maximum supply capacity of 50 cfs, a surplus in supply capability of approximately 19 cfs is calculated.

The distribution system piping infrastructure has been designed conservatively. The 12-inch mains and 10- and 8-inch laterals have sufficient capability to carry the maximum day supply capacities of the existing and proposed near-term treatment facilities. Future expansion requiring the infrastructure to carry 4.0 mgd or greater demand will result in upsizing of the distribution piping infrastructure.

The estimated total demand projected for the year 2015 within the GDPUD sphere of influence, including domestic, commercial, and agricultural uses, as well as system losses, is approximately 13,535 acre-feet. This anticipated demand is based upon a projected approximate population of 17,690 people within GDPUD's sphere of influence. These assumptions and water use estimates may prove low. Prompted by such possibilities as the potential construction of a bridge associated with the proposed Auburn Dam, potential building moratoria in other areas of the County or within the region, possible higher rates of County-wide growth than expected, and a decreasing reliance on well water, the demand for water within the GDPUD may reach approximately 15,000 acre-feet by the year 2010 (County Water Agency, 1991).

The County Water Agency and the GDPUD are currently studying a number of alternative water supply projects designed to meet this potential 15,000 acre-feet demand. The initial project will likely involve sharing the U.S. Bureau of Reclamation (USBR) contract water with the EID. This contract water could provide an additional firm yield 5,625 acre-feet when adjusted for shortages. The USBR contract water and other water which GDPUD and the County Water Agency are currently pursuing might be delivered to the District service area by any or all of the following projects:

- Diversion from the Rubicon River, utilizing water stored by SMUD at Loon Lake;
- Pumping from the South, Middle, or North Forks of the American River; and
- Pumping from a water storage facility on the North Fork American River at Auburn.

Grizzly Flats Community Services District

The Grizzly Flats Community Services District service area is located approximately 12 miles east of Somerset, California. The community's population is largely retired persons of which approximately one-half are permanent, year-round residents. The Community Services District was formed for the purpose of water treatment and distribution. System water supply originates from diversions on two creeks: Big Canyon and North Canyon. Big Canyon and North Canyon creeks are fed by seasonal rain and snow-melt as well as springs that flow year round. Minimum direct diversion flows typically occur in late August and September is dependent upon weather patterns. These flows have been insufficient to meet demands in each of the last three years which has forced water use restrictions. The maximum flow in the winter exceeds demands and was approximately 500 gpm (1988 records).

The GFCSD was formed in November, 1987, when the facilities were taken over from the privately owned Grizzly Park Water Company. The 1993 service area includes the Grizzly Park subdivision and a few large perimeter lots covering a total area of approximately 1,100 acres. GFCSD is located between the North and Middle forks of the Cosumnes River, adjacent to the eastern boundary of the EID sphere of influence. The elevation across the GFCSD ranges from approximately 3,600 feet msl at the southwest end to approximately 4,200 feet msl at the northeast end. GFCSD currently provides treated water to residents within the service area.

The LAFCO sphere of influence for GFCSD consists of approximately 9,200 acres bounded on the north by the North Fork Cosumnes River and on the south and west by the Steely Fork Cosumnes River and extends to the east to Bear Meadow Creek.

At present, treated water production delivered to the GFCSD system provides approximately 100 acre-feet per year. Surface water is treated at a package water treatment plant and discharged into a single pressure zone distribution system that serves the entire service area. Ability to serve is limited by the capacity of the existing reservoir which stores winter runoff to help meet summer demands. Active storage capacity is of the order of 15-20 acre feet.

The GFCSD is entitled to divert all but a 25 percent fish release of the season runoff from North Canyon and Big Canyon creeks. In the summer season, this percentage is increased to all but 15 percent of the runoff if a low rainfall season has occurred. Therefore, the allowable diversion is dependent on stream flow rather than a set annual quantity. A water master plan completed by the District in February 1989, has been found to be inadequate. For 1988 stream flows, the report estimates that a total annual entitlement of as much as 568 acre-feet could have been diverted, if needed. For 1988, reportedly the total diversion was approximately 130 acre-feet of which 88 acre-feet went to domestic use and the remaining 42 acre-feet were lost in reservoir evaporation and percolation. The district has proposed the development of a supplemental water storage project although the particulars of such a project have not been determined at this time. A reconnaissance level study has been initiated for the purpose of determining the most appropriate project. The County Water Agency is working with the GFCSD to complete this study with consideration being given to onstream storage facilities on Big Canyon and North Canyon creeks. Stream gages installed in 1993 will be used to provide data for evaluation of the available supplies. The study is intended to identify the need, scope, and preliminary costs for supplemental water supply alternatives. In 1993, the District imposed a Water Emergency based upon preliminary findings that the system was unable to assure adequate continuous service to its 420 existing customers.

Transmission and Distribution System. Water leaving the Big Canyon and North Canyon diversions enters Eagle Ditch (now a closed conduit) and flows three miles to a 7.5 mg, uncovered, earthen storage reservoir.

The distribution system consists primarily of six-inch pipes with some short reaches of eight-inch. The system operates as a gravity system for 85 percent of the services; the other 15 percent are served from a hydropneumatic system. System pressures range from 50 psi to more than 100 psi. Houses in areas of high pressure use individual PRVs. Fire flow availability is 1,000 gpm within the system. In the hydropneumatic zone, an engine-driven booster pump stands by in the event of a power outage.

Treatment and Storage. The water treatment plant receives flow from the open 7.5 million gallon reservoir. The treatment plant consists of gravity filters of 200 gpm capacity. No coagulation is provided. A filter aid polymer and chlorination are presently the only chemicals added. The system contains four gravity finished water storage reservoirs for a present total storage capacity of 0.40 mg.

Summary of System Capacity and Delivery Capability. The existing water distribution system has adequate capacity to serve the residential community of Grizzly Flats. Because the service area is primarily residential, the six-inch piping is adequate to maintain system pressures under maximum demand and fire flow conditions. The system is not presently capable of supporting heavy commercial or industrial developments, however.

The distribution system expansion plan is appropriate for the residential setting it is presently serving. Treatment capacity is presently adequate to meet existing demands. Expansion improvements to the treatment capacity, water storage, and distribution system are completed on an as-needed basis.

The expansion potential of the system is limited by supply. The total diversion available to the district in 1988 was approximately 185 million gallons (GFCSD, 1989). A water balance, calculated by the County Water Agency, which includes reservoir losses, indicates that the maximum number of lots supportable by existing supplies is 420 assuming 25 percent are owned by part-time residents.

On March 9, 1993, the GFCSD declared a water shortage emergency within the District. This action was based on a study by the El Dorado County Water Agency which noted that "water supply was (currently) adequate, but water storage capacity is relatively small even for current customers." The study further estimated existing storage capacity will support approximately 380 customers yet they are currently serving 420. In taking this emergency action, the GFCSD will: 1) deny all new applications until water storage is increased; 2) invoke water conservation during the dry season; and 3) set aside adequate water for fire suppression. A study is underway to determine the best solutions for solving the water supply/storage problem.

South Lake Tahoe Public Utility District (SLTPUD)

The STPUD service area includes the City of South Lake Tahoe, Tahoe Paradise, the community of Meyers, the Fallen Leaf Lake, and Emerald Bay areas. The district includes 18 water service pressure zones. All zones are interconnected to form a contiguous network. Some zones require pumped service. Specific discussion regarding individual pressure zones can be found in the *Water System Master Plan Update*, Boyle Engineering Corporation, 1989.

The existing water supply for the district is comprised of 32 groundwater wells. The total production capacity of all wells within this system is approximately 14.3 million gallons per day (mgd). This capacity is the maximum theoretical production capacity assuming that all wells are active and no wells are down for repair. A surface water filtration plant along Cold Creek has been abandoned.

Although there are no projections available relative to increases in demands on the STPUD system for the time frame of the General Plan, building permits have been allocated at over 100 per year for the past five years. This rate of development is expected to continue. Additionally, because building is controlled at Lake Tahoe, the percentage of dwellings with year-round occupancy continues to increase. The ultimate demand will not be known until the Tahoe Regional Planning Agency completes its update of the Regional Land Use Plan. STPUD anticipates meeting these increases in demands, as needed, using either surface or groundwater sources.

STPUD's groundwater supplies contain high concentrations of radon, arsenic, and uranium which will require substantial capital investment for treatment works to reduce concentrations to enable compliance with safe drinking water standards adopted by the Environmental Protection Agency (EPA) and California Department of Health Services (DOHS).

The water distribution lines in the water systems have been constructed intermittently over a period of several decades. This process has resulted in newer, adequately sized facilities in some areas while other areas have old, deteriorating, and inadequately sized infrastructure.

TABLE 5-7
EXISTING WATER SUPPLY, STPUD

Water System	Source	Well Production/ Treatment Capacity
Original	19 wells Treatment Plant	9.867 mgd 2.318 mgd
Angora	10 wells	3.162 mgd
Tahoe Paradise	3 wells	2.808 mgd
TOTAL	32 wells	11.837 mgd

Tahoe City Public Utility District

The Tahoe City Public Utility District (TCPUD) provides domestic water to private lands within the west Tahoe area including El Dorado County and Placer County. The Rubicon Water System of the TCPUD (one of four systems within the district) currently provides about 175 acre-feet of water per year to the El Dorado County portion of this district. SWRCB staff have proposed a system of water allocation throughout the west Tahoe area resulting in an allocation of 575 acre-feet per year to the Rubicon System. Water supply for the Rubicon System is derived exclusively from groundwater. The 1991 Water System Master Plan recommends that the district continue this practice. There are, however, a number of uncertainties associated with this recommendation including: 1) the ability to construct new wells within the Rubicon System; 2) the availability of adequate groundwater supplies; and, 3) the quality of groundwater supplies.

The district must conduct geo-hydrological investigations and monitoring for radon contamination prior to determining the feasibility of relying on groundwater to meet long-term water supply needs.

Present capacity of existing wells in the Rubicon System appears to be adequate to meet the demand projected for the year 2010. New wells must be constructed to satisfy demands estimated at ultimate buildout. It should be noted that ultimate demand will not be known until the Tahoe Regional Planning Agency completes its update of the Regional Land Use Plan.

Water Supply Issues

A number of issues and problems are associated with the ability of the County's water purveyors to supply water to existing and future users. The largest concern is the potential shortfall in water supplies for existing users and for new users who have been promised service. One reason for the shortfall is the age and poor quality of existing water infrastructure. For example, it is estimated that as much as one-quarter of all water diverted by EID is lost to leaks and evaporation. Additionally, recent years of drought has impacted the County's water supply and no immediate relief in the form of precipitation can be expected to increase the water supply. No new large-scale sources of water can be expected in the immediate future although the County Water Agency and the various water purveyors are in the process of acquiring water rights and developing supply sources.

In response to water supply concerns, the County adopted the *El Dorado County Public Water Planning Ordinance* (Ordinance No. 4325) on March 8, 1994 (Appendix J). The ordinance requires the preparation of a water supply and demand report to include a water availability assessment for each public water purveyor. The intent of the report is to determine the adequacy of existing and planned future public water supplies to meet existing and planned future development (demand) projected over a twenty (20) year planning time horizon (Appendix K).

Additional water production/use data is contained in Appendix L.

WASTEWATER COLLECTION AND TREATMENT

Wastewater collection, treatment, and disposal systems in El Dorado County presently exist in the western half of the County and in the Tahoe Basin. The El Dorado Irrigation District operates and maintains a total of five wastewater systems. The Georgetown Divide Public Utility District operates one community disposal system in the Auburn Lake Trails Subdivision On-Site Wastewater Disposal Zone and manages on-site disposal for the remaining 950 lots in the zone; the South Tahoe Public Utility District operates the wastewater system in the vicinity of South Lake Tahoe. The remainder of the County is unsewered, with individual homes using on-site septic systems. The suitability of the soils on the lower Western Slope of the County to accept septic tank effluent varies widely. Many areas have a geology that includes fault zones, shear zones, serpentine, melange, and other rock and soil types that may not be suitable for acceptance of septic tank effluent.

El Dorado Irrigation District

EID owns, operates, and maintains three wastewater treatment plants, described as follows.

El Dorado Hills Collection System. The El Dorado Hills System is described in a January 1991 report by CH₂M Hill entitled *Supplement No. 2 to the Preliminary Design Report for Assessment District No.3*. An update of this analysis is scheduled for 1994. The following summarizes pertinent information regarding the existing collection system.

EID estimates there are 3,620 sewer connections to the El Dorado Hills System. The present average dry weather flow (ADWF) is 0.746 mgd. Peak wet weather flows (PWWF) are presently 1.93 mgd. According to the report, the gravity sewers have sufficient capacity to carry 28,611 sewer connections or an ADWF of 8.6 mgd.

Presently, EID operates four main lift stations in the El Dorado Hills area. The Marina Village Pump Station (1.72 mgd) and the New York Creek Pump Station (2.28 mgd) pump to St. Andrews Pump Station. The T-1 Station presently pumps to the St. Andrews Pump Station but is slated to be abandoned. Its sewage will be diverted to a new lift station in Timberline Ridge which will also pump to the St. Andrew's Pump Station. From the St. Andrews Pump Station, sewage travels both by force main and gravity sewer to the El Dorado Hills Wastewater Treatment Plant.

The El Dorado Hills wastewater system provides service to subdivisions and other developments within the El Dorado Hills service area. The existing collection and interceptor system extends southward from Folsom Reservoir along Francisco Drive, El Dorado Hills Boulevard, and Latrobe Road to the El Dorado Hills Wastewater Treatment Plant.

Deer Creek Collection System. The Deer Creek-Mother Lode wastewater system serves the Cameron Park and Mother Lode service areas. There are two major collection networks that are connected by the Mother Lode Interceptor. The first network is the Cameron Park collection system which serves development within Cameron Park from Green Valley Road south to U.S. Highway 50 as well as the commercial area south of the highway at Cameron Park Drive. The second network is the Sanitation District No. 2 collection system that provides service to development within the El Dorado-Diamond Springs area. The Mother Lode force main conveys sewage from this collection system and several smaller local collection systems to the Deer Creek Wastewater Treatment Plant.

The Deer Creek Collection System is described in a recent report by Owen Engineering. Wastewater flows from both service areas flow to the Deer Creek Wastewater Treatment Plant.

The collection system in the Deer Creek Service Area consists of gravity lines from six inches to 36 inches in diameter and associated force mains serving small portions of the service area.

The Golf Course and Bass Lake interceptors combine all flows north of U.S. Highway 50 into a 200-foot-long section of 18-inch pipe that crosses U.S. Highway 50. From U.S. Highway 50 heading south, the Cameron Park Interceptor becomes parallel 18- and 24-inch lines that gravity flow as far as Flying C Road.

At Flying C Road, wastewater from the 12-inch Mother Lode Force Main and the Cameron Park Interceptor combine into the 36-inch Deer Creek Interceptor and gravity flow to the siphon intake structure at Deer Creek. Wastewater then flows via an invert siphon consisting of two 20-inch pipes and one 18-inch pipe to the Deer Creek Wastewater Treatment Plant.

The collection system serving the Mother Lode Service Area consists of a variety of pump stations, force mains, and gravity sewers. The area from the Town of El Dorado east to Diamond Springs is connected to the State Route 49 Interceptor which starts in Diamond Springs as a 24-inch line and terminates at the El Dorado Ponds near the Town of El Dorado as a 36-inch line. The State Route 49 Interceptor was completed in April 1990, replacing the old 12- and 14-inch interceptors.

The El Dorado Ponds, until recently, served as an equalization basin for the El Dorado Pump Station. Construction of a new wet well in 1990 has allowed the abandonment of the pond system.

Wastewater from the wet well is pumped by the El Dorado Pump Station via the 12-inch Mother Lode Force Main. This force main extends approximately eight miles west from the El Dorado Ponds then gravity flows approximately one mile to the intersection of the Deer Creek Interceptor at Flying C Road. The district has plans to parallel the Mother Lode Force Main and increase the El Dorado Pump Station capacity as development occurs. Sewage from communities and developments west of the El Dorado Ponds is pumped into the Mother Lode Force Main.

The Camino Heights Wastewater System. The Camino Heights wastewater system provides service to residential and commercial development within Camino Heights, approximately three miles east of Placerville, directly south of U.S. Highway 50. The existing collection system consists of approximately 8,700 feet of six- and eight-inch gravity sewer lines. A main eight-inch line runs along Camino Heights Drive from U.S. Highway 50 to the Wastewater Treatment Plant. The capacity of the treatment facility is limited by the spray field disposal system. The present capacity is approximately 24,000 gpd.

In addition to the district's three major wastewater treatment plants, EID operates a small evaporation pond system serving the Rancho Ponderosa subdivision and the Gold Ridge Forest community septic/leachfield system which is in the Pollock Pines area.

A summary of capacity and delivery capability for each system is presented in Tables 5-8 and 5-9.

**TABLE 5-8
WASTEWATER COLLECTION SYSTEMS, EID**

Wastewater System	Communities Served	Approximate Number of Connections
El Dorado Hills	El Dorado Hills	3,620
Deer Creek	Rescue, Cameron Park, El Dorado, Diamond Springs, Ponderosa Heights, Shingle Springs, Buckeye School, Gold Oak School	7,760
Camino Heights	Camino Heights	106
Rancho Ponderosa ¹	Rancho Ponderosa	93
Gold Ridge ²	Pollock Pines, U.S. Forest	40

¹Pond system
²Community leachfield/septic system
Source: El Dorado Irrigation District

**TABLE 5-9
SUMMARY OF COLLECTION SYSTEM CAPACITIES, EID**

Wastewater System	Maximum PWWF	Maximum Hydraulic
El Dorado Hills	1.93 mgd	4.1 mgd ¹
<i>Deer Creek</i> State Route 49 Interceptor Cameron Park Interceptor Mother Lode Force Main	2.3 mgd ² 5.9 mgd ² 2.6 mgd ²	22.0 mgd 13.4 mgd ³ 2.9 mgd ⁴
Camino Heights	23,800 gpd (ADWF)	60,000 gpd

¹4.1 mgd is the capacity of St. Andrews Pump Station, maximum hydraulic capacity of gravity sewer 22.2 mgd.
²Based on seven percent growth per year since 1987 (see Owen report).
³Maximum capacity of 18-inch line under U.S. Highway 50.
⁴Total combined capacity of pump stations contributing to the Mother Lode Force Main.
Source: El Dorado Irrigation District

**TABLE 5-10
WASTEWATER TREATMENT FACILITIES EID (mgd)**

Facility	1993 Flowrate	1993 Capacity	Planned Expansion
El Dorado Hills	1.1 ADWF	1.6 ADWF	3.3 ADWF (1997)
Deer Creek	1.8 ADWF	2.5 ADWF	3.6 ADWF (1997)
Camino	0.3 gpd ADWF	.06 gpd ADWF	None

Source: El Dorado Irrigation District

Wastewater Treatment and Disposal

The El Dorado Irrigation District operates three wastewater treatment plants associated with the collection systems previously described. Each facility's capacity is summarized in Table 5-10.

El Dorado Hills Wastewater Treatment Plant. The 1993 ADWF to the El Dorado Hills plant is 1.1 mgd. The capacity of the plant is presently 1.6 mgd. The plant is slated for expansion in 1992 to 2.7 mgd.

Currently, effluent is stored in a 66 acre-foot, on-site reservoir for reuse at the El Dorado Hills Golf Course and at Golden State Buildings Products. Excess effluent in the winter is discharged into Carson Creek. Discharges from November through April are permissible with the current level of treatment. Until the proposed Business Park Golf Course or other reuse demands are created, discharges to Carson Creek will be continued in the winter.

Deer Creek Wastewater Treatment Plant. The present ADWF to the Deer Creek plant is 1.8 mgd; the plant's capacity is 2.5 mgd. An expansion of 4.8 mgd ADWF is being planned.

Treated wastewater at the Deer Creek plant is discharged into Deer Creek or diverted to water reclamation facilities. Discharge requirements for the Deer Creek Wastewater Treatment Plant are the same as for the El Dorado Hills Wastewater Treatment Plant. During the summer, all effluent is filtered to meet discharge limits of ten milligrams per liter (mg/l) of Biological Oxygen Demand and suspended solids. Two or more golf courses are planned that will use the Deer Creek treated effluent during the summer irrigation season. Effluent reuse could substantially reduce discharges to Deer Creek during the summer. All treated effluent would continue to be discharged to Deer Creek during the winter.

Camino Heights Wastewater Treatment Plant. The Camino Heights Wastewater Treatment Plant consists of aerated lagoons and spray field disposal. The lagoons are designed to treat 60,000 gpd. However, the spray fields are under-designed and have a capacity to dispose of approximately 24,000 gpd of treated effluent. The treatment plant capacity is therefore limited by the size of the disposal field which is not expandable.

The Deer Creek-Mother Lode wastewater system serves the Cameron Park and Mother Lode service areas. There are two major collection networks that are connected by the Mother Lode Interceptor. The first network is the Cameron Park collection system which serves development within Cameron Park from Green Valley Road south to U.S. Highway 50 as well as the commercial area south of the highway at Cameron Park Drive. The second network is the Sanitation District No.2 collection system that provides service to development within the El Dorado-Diamond Springs area. The Camino Heights wastewater system provides service to residential and commercial development within Camino Heights, approximately three miles east of Placerville, directly south of U.S. Highway 50. In addition to the district's three major wastewater treatment plants, EID operates Rancho Ponderosa, a pond system, and Gold Ridge, a community leachfield/septic system.

Georgetown Divide Public Utility District

All of the existing land uses within GDPUD's sphere of influence are served by privately-owned individual sewage disposal systems with the exception of a portion of the residents within the 2,500-acre Auburn Lake Trails Subdivision. Approximately 150 out of the 1,100 dwelling units within the subdivision are served by a small community disposal system using individual septic tanks together with a community collection system, wet well, pump station, and leach field. The community facilities were constructed by the developer who conveyed the system to GDPUD for ownership, operation, and maintenance.

The entire Auburn Lake Trails Subdivision is within a designated On-Site Wastewater Disposal Zone (OWDZ) which is regulated under a program mandated by the State Regional Water Quality Control Board and managed by GDPUD.

Community Disposal System. The GDPUD operates a community disposal system (CDS) for a portion of the Auburn Lake Trails Subdivision. The system currently serves 100 homes. The maximum number the system is able to serve is 138 homes. Septic tank effluent from each house flows to a pump station. The pump station contains two 25 horsepower self-priming pumps that pump effluent to the CDS. The pumping rate is 700 to 900 gallons per pump cycle. The disposal system consists of a 1,000-gallon concrete storage tank and a gated feed line serving four distribution boxes that distribute flow to 13 disposal trenches. The total length of trench is 4,600 linear feet. The remainder of the Auburn Lake Trails Subdivision lots use conventional or alternative on-site wastewater disposal systems.

On-Site Wastewater Management. The GDPUD has developed an on-site wastewater management program for the Auburn Lake Trails Subdivision. The program began developing in 1971 and today includes system design, construction management and inspection, maintenance and operation, and environmental monitoring.

The program was developed because the geology in certain areas of the Auburn Lake Trails Subdivision is only marginally acceptable for on-site wastewater disposal. Environmental degradation from improperly designed on-site systems was a primary concern for the GDPUD. Therefore, the program was developed to ensure environmental quality for the Auburn Lake Trails development and surrounding areas.

The history and particular aspects of the program are contained in a paper by the GDPUD to the National Environmental Health Association (Prince, R.N. and Davis, M.E., February 1988).

Grizzly Flats Community Services District

All existing development within GFCSD is served by privately-owned individual sewage disposal systems. It is assumed that all future development within GFCSD's sphere of influence will also be served by individual systems.

South Tahoe Public Utility District

The STPUD Wastewater Service Area includes the City of South Lake Tahoe, Meyers, Tahoe Paradise, Fallen Leaf Lake, and Emerald Bay areas. The district operates an advanced secondary wastewater treatment plant in the City of South Lake Tahoe, approximately 1.5 miles from the south shore of Lake Tahoe at the base of the Upper Truckee River Valley. The treatment plant began operation in 1960 and in 1968 expanded to a 7.5 mgd capacity using coagulation, multi-media filtration, and activated carbon treatment systems. Treated effluent was exported to Indian Creek Reservoir in Alpine County. Because of inability to fully comply with discharge requirements of the EPA and the Regional Water Quality Control Board, the treatment plant has undergone a series of improvements and modifications; and the capacity of the plant was reduced to 7.0 mgd in 1977. Upon completion of various improvements and modifications in 1989 (including conversion to filtered secondary level of treatment), the capacity of the treatment plant was restored to 7.5 mgd. In 1990, the treatment plant was expanded to its 1993 capacity of 7.7 mgd as described below. An additional change included exporting the treated effluent via a pumped transmission line over Luther Pass to Alpine County for storage in Harvey Place Reservoir. The treated effluent is then reused for crop irrigation.

According to the STPUD Treatment Facility Expansion EIR, Quad Consultants 1989, there were 76,086 sewer units allocated generating a peak flow of 7.305 mgd. Additionally, the U.S. Forest Service, State Parks, and Fallen Leaf Lake have reserved 3,750 sewer units for a capacity of 0.360 mgd of wastewater treatment plant capacity. This results in a combined allocated flow of 7.665 mgd. The remaining 0.036 mgd, or approximately 372 sewer units of treatment capacity, has been reserved for affordable housing.

In order to accommodate the anticipated growth through the year 1991, the district embarked on an expansion program designed to increase the capacity of the treatment plant by 200,000 gallons to a total of 7.7 mgd. An EIR/EIS for this expansion program was completed in 1989. As part of this EIR/EIS, a multi-agency mitigation agreement was established that identifies a total of 30 separate mitigation measures (in addition to compliance with existing regulations) to mitigate the potential negative environmental impacts of the plant expansion. Included in these mitigation agreements, the district is required to plan its facility improvements in concert with the Tahoe Regional Planning Agency's (TRPA) adopted plans, rules, and regulations. Under this plan, the district shall not connect more than 1,309 new residential sewer units (or 409 dwelling units). Of these, there were 76 residential sewer units of remaining capacity in 1991. These remaining sewer units are not associated with the 0.2 mgd plant expansion. STPUD was also granted the potential to connect up to 1,000 new sewer units for commercial, public service, or recreation projects as long as/or when such projects are approved by the TRPA and do not exceed the allocation limits as set forth in the 1986 TRPA Regional Plan.

Over the longer term, the district has made plans to increase the capacity of the treatment plant to a total of 7.9 mgd. These plans, known as the Phase II Expansion Project, include the following improvements: long-term odor control, construction of a combined pre-treatment system, full conversion of an equalization basin to an activated sludge aeration basin, filter modifications, chlorine contact mixing and baffling improvements, return activated sludge pump station expansion, and raw sewage flow distribution. The TRPA completed a five-year update of its Regional Plan in the fall of 1991. Subsequently, STPUD began preparing an EIR/EIS to fully evaluate the potential impacts of expansion to meet the growth prescribed by TRPA.

A Future Connections Facilities Plan, completed in January 1993, details the technical basis for accepting future connections to the sanitary sewer system. A Draft EIR/EIS is now being prepared to record the scope of the District's proposal to provide additional connections to the sanitary sewer system and analyze all known environmental effects. The Initial Study and Notice of Preparation steps have been completed. Following the Draft EIR/EIS circulation and comment period, which will be completed in November 1993, a Final EIR/EIS will be prepared. The Final EIR/EIS is expected to be completed and approved by February 1994.

City of Placerville

The City of Placerville operates a wastewater collection and treatment system, serving areas of the City north and east of Weber Creek, with a treatment plant near the confluence of Weber and Hangtown Creeks.

STORM DRAINAGE

This section examines the drainage infrastructures in the following eight major drainage basins where significant drainage infrastructures exist and where it has or may impact development in the County:

- Coloma Canyon between Greenwood and Garden Valley;
- Finnon Reservoir drainage;
- Weber Creek from the American River to Placerville, including the Cold Springs, Dry Creek, and Spring Creek tributaries;
- Deer Creek from Shingle Springs to the County line;
- Big Canyon Creek from El Dorado to the Cosumnes River, including the Slate, Little Indian, and French Creek tributaries;
- Middle Fork of the Cosumnes River within the Somerset/Fairplay vicinity;
- Cedar Creek from Omo Ranch to the Cosumnes River; and
- Jenkinson Lake drainage.

The El Dorado County Department of Transportation (DOT) is preparing a County-wide Master Plan of Drainage. Following adoption of the County Master Plan of Drainage, the County will amend the General Plan to incorporate the goals, objectives, and policies of the drainage plan.

The goals of the Master Plan of Drainage are to address the increasing number of problems associated with stormwater runoff under County jurisdiction and to prevent the creation of new problems. While flooding is the primary problem, other problems connected with stormwater runoff include erosion, sedimentation, and degradation of water quality. Products of the Master Plan of Drainage include a capital improvement program to upgrade and maintain major conveyance structures; a maintenance and operations program to address minor facilities; and, a County Drainage Manual to provide technical design standards for future designs. Detailed drainage studies in El Dorado Hills, Cameron Park, and the Townsite of El Dorado are expected to be completed during 1993. These studies will identify capital improvement costs and provide funding mechanisms for future upgrades and maintenance of stormwater conveyance structures and act as pilot programs for both the capital improvement and maintenance and operations programs. Future studies will be scheduled for additional watersheds consistent with the adopted funding mechanism.

For the scope of this study, however, the major drainages identified above were examined for existing utilities which consists primarily of culverts crossing major roadways and bridges crossing major streambeds as shown in Table 5-11.

TABLE 5-11 EXISTING DRAINAGE INFRASTRUCTURE				
		Culverts		
Drainage	Major Roadway	Number	Size	Bridges
Coloma Canyon	Greenwood Road	2	15 inches	#56-21101
		4	18 inches	
		1	24 inches	
		1	30 inches	
		2	48 inches	
		1 box culvert		
Finnon Reservoir	Mosquito Road	4	18 inches	Suspension bridge
		2	24 inches	
		1 box culvert		
Weber Creek	Lotus Road	10	18 inches	#21-21301
		1	24 inches	
		1	30 inches	
		1	84 inches	
		1	108 inches	
	Green Valley Road	3	18 inches	#2-21105
		9	24 inches	#2-21104
		1 box culvert		#2-21103
				#2-21102
				#2-21101
	Deer Valley Road	1	18 inches	#66-21102
		3	24 inches	
		1	30 inches	
		1	36 inches	
		3 box culverts		

**TABLE 5-11
EXISTING DRAINAGE INFRASTRUCTURE**

		Culverts		
Drainage	Major Roadway	Number	Size	Bridges
	Missouri Flat Road	1 1 2 1 1 1 1	18 inches 24 inches 30 inches 36 inches 84 inches 90 inches 36" x 22" cmp	
	Cold Springs Road	3 2 1	18 inches 24 inches 72 inches	
Deer Creek	Latrobe Road			#18-211-5 #18-21106
Big Canyon Creek	French Creek Road	2 (Many small 8-inch to 12-inch culverts)	18 inches	#13-21103 #13-21101 #13-21102
Middle Fork	Outingdale Road	1 (Various 12-inch and 10-inch culverts)	18 inches	
	Mt. Aukum Road	5 6 2 1 1	18 inches 21 inches 24 inches 30 inches 48 inches	#21-21301
	Perry Creek Road	(Various 12-inch) 1 3 1 1 1 box culvert	15 inches 24 inches 30 inches 36 inches	#98-21102
Cedar Creek	Cedar Creek Road	1 2	20 inches 24 inches	
	Omo Ranch Road	5	18 inches	
Jenkinson Lake	Mormon Emigrant Trail	24 35 3	18 inches 22" x 13" 24 inches	
¹12 inches and smaller culverts not included				

The drainage areas considered within the Master Plan of Drainage are depicted on a large scale map available for review at the El Dorado County Planning Office and are described as follows.

Coloma Canyon. The Coloma Canyon drainage covers an area of approximately 7.5 square miles. Coloma Canyon Creek parallels Greenwood Road between the communities of Garden Valley and Greenwood.

Finnon Reservoir. The Finnion Reservoir drainage covers an area of approximately 4.0 square miles. The major roadway running through the drainage is Mosquito Road.

Weber Creek. The Weber Creek drainage covers approximately 40 square miles from Placerville west to the South Fork of the American River. Major roadways in the drainage include Deer Valley, North Shingle, Ponderosa, Green Valley, Lotus, Cold Springs, Missouri Flat, Luneman, and Springvale roads.

Deer Creek. The Deer Creek drainage covers approximately 21 square miles beginning at Shingle Springs and extending southwest to the County line. The major roadway running through the area is Latrobe Road.

Big Canyon Creek. The Big Canyon Creek drainage covers approximately 36 square miles extending from the Town of El Dorado south to the County line. Major roadways in the Big Canyon Creek drainage include French Creek and South Shingle roads.

Middle Fork of the Cosumnes River. The Middle Fork drainage covers approximately 23 square miles in the vicinity of the towns of Fairplay and Somerset. Major roadways in this basin include Mt. Aukum, Outingdale, Perry Creek, Fairplay, and Slug Gulch roads.

Cedar Creek. The Cedar Creek drainage covers approximately 37 square miles from the intersection of Omo Ranch Road and the Cosumnes River west to Mt. Aukum Road. Major roads in the Cedar Creek drainage include Omo Ranch, Indian Diggins, and Farnham Ridge roads.

Jenkinson Lake. Jenkinson Lake drainage includes approximately 18 square miles of area from Iron Mountain west to Jenkinson Lake. Major roadways in the drainage include the Mormon Emigrant Trail, Park Creek Road, and Hazel Valley Road.

SOLID WASTE

El Dorado County is divided into two waste management regions: the East Slope comprised of the South Lake Tahoe Basin (Basin), and the West Slope including the area from Echo Summit to the Sacramento County line.

On the East Slope, approximately 165 tons/day (average) of all Basin solid waste is collected and processed by South Tahoe Refuse Company, Inc., at a transfer station located in the City of South Lake Tahoe. Since July 1, 1992, all Basin waste is received, compacted, and transported to the Lockwood Landfill (outside of Sparks) in Storey County, Nevada. Refuse Inc., the owner of the Lockwood Landfill and South Tahoe Refuse Company, have entered into a thirty-year contract. Prior to 1992, Basin waste was landfilled in Gardnerville, Nevada. All solid waste disposal and landfilling has been prohibited in the Basin since 1970 following closure of the Meyers dump.

On the West Slope, approximately 220 tons/day (average) of solid waste is taken to the Union Mine Disposal Site, a Class III municipal solid waste disposal site which is owned by El Dorado County and operated by El Dorado Landfill Inc., under contract with the County. Historically, the Union Mine area was mined for gold from 1850 to 1940. Beginning in the early 1940s, the site was used as an illegal refuse dump. The County obtained the approximate 217 acre property in 1962 and operated the facility as an open burn dump until 1969 at which it was converted to a solid waste sanitary landfill. The facility was operated by the El Dorado County Department of Public Works until 1978 when the operation of the facility was contracted to El Dorado Landfill, Inc. The Union Mine facility has functioned as the County's only open and active landfill since 1974 following the closure of the Georgetown dump. From 1969 to 1988, the Union Mine facility also accepted septage until new State regulations prohibited placement of septage in unlined ponds. In 1991, the County acquired a private 20-acre parcel adjacent to the existing Union Mine property for the purpose of constructing a special leachate pollution pond. The County is also acquiring additional property from the Bureau of Land Management which will bring the total acreage of the Union Mine Disposal Site to approximately 331 acres.

Union Mine Expansion and Phased Closure

The Union Mine Disposal Site property consists of the existing landfill waste management unit which encompasses approximately 33 acres and a future adjacent expansion area of an additional 14 acres to form a "large hill" of 47 acres. The final landfill configuration will consist of approximately 4,960,000 cubic yards. Upon completion, the landfill expansion area will have a maximum elevation of approximately 1,350 feet Mean Sea Level (MSL) and taper to approximately 1,270 feet MSL on its boundaries.

In order to comply with new regulations, the bottom of the 14 acre expansion area will be lined with compacted clay and synthetic materials. Groundwater interceptor drains will also be installed underneath the clay/synthetic liner, and a leachate collection system will be incorporated above the liner.

El Dorado County also will be constructing a septage receiving facility at the Union Mine facility capable of accepting approximately 9,600 gallons per day. Two optional leachate collection/treatment systems are currently being considered. Selection of the appropriate system will be based on the septage/leachate characteristics and treatment. The character of this material is currently being evaluated. The two optional systems consist of the following:

- A collection/treatment facility located near the edge of the landfill. The package treatment facility would treat the leachate and discharge effluent to Martinez Creek. The estimated capacity of the facility is approximately 15 gallons per minute (gpm).
- A collection system that would transfer septage and leachate to the existing El Dorado Irrigation District sewer main located in the community of El Dorado. This facility would require the construction and installation of a sewer line and life station to allow transfer of the wastes to the existing sewer main.

The Union Mine Disposal Site, including the expansion area, will provide the County with over 5.96 million cubic yards of refuse capacity which will allow for approximately 20 years of service life or provide enough capacity to accommodate the County to the year 2012. The phased closure activities, including the placement of a clay/plastic cap in accordance with Subtitle D of Federal RCRA and Titles 14 and 23 of the California Code Regulations, will be conducted throughout the life of the disposal facility.

Franchise Areas

Residential and commercial garbage collection is performed entirely by the private sector under the authority of franchise contracts with the respective controlling jurisdictions as identified in Table 5-12. Residential pickup is mandatory within the Basin and the El Dorado Community Services District franchise area. In the remaining areas of the County, as well as commercial garbage collection, garbage pickup is not compulsory. A map of the solid waste franchise area boundaries is on file at the County Planning Department.

California Integrated Waste Management Act of 1989

As mandated by the California Integrated Waste Management Act of 1989 (California Assembly Bill 939), the County prepared the El Dorado County Source Reduction and Recycling Element in late 1991. This plan, which is part of the County's Integrated Waste Management Plan, sets forth recycling and waste reduction programs in an effort to reduce the amounts of solid waste entering the County's Union Mine Landfill. Included in the plan are programs to establish two Materials Recovery Facilities which will eventually receive all of the waste generated in the County and will be responsible for removing all recyclable materials. In addition, AB 939 requires each county in California to prepare and implement a County Integrated Waste Management Plan (CIWMP). El Dorado County is responsible for preparing a CIWMP by January 1993. The plan will include the following components:

- Waste characterization study;
- Source reduction component;
- Recycling component;
- Composting component;
- Solid waste capacity component;
- Public information component;
- Special waste component; and
- Household hazardous waste component.

By January 1995, El Dorado County, in accordance with State law, must also divert at least 25 percent of solid waste from landfills or transfer facilities through source reduction, recycling, and composting. By January of the year 2000, the County must divert 50 percent of its solid waste.

**TABLE 5-12
GARBAGE COLLECTION FRANCHISE AREAS**

Franchise Collection Area Number	Company	Franchise Granting Authority	Mandatory Pickup	Landfill Utilized
1	El Dorado Disposal Company	City of Placerville	No	Union Mine
2	El Dorado Disposal Company	El Dorado County	No	Union Mine
2b	El Dorado Disposal Company	El Dorado Hills Community Services District	Yes	Union Mine
3	American River Disposal Company	El Dorado County	No	Lockwood (nears Sparks)
4	Tahoe City Disposal Company	El Dorado County	No	Eastern Regional (near Truckee)
5	South Tahoe Refuse Company	El Dorado County	Yes	Lockwood (near Sparks)
5b	South Tahoe Refuse Company	City of South Lake Tahoe	Yes	Lockwood (near Sparks)
6	Amador Disposal Company	El Dorado County	No	Union Mine
7	Sierra Disposal Service Company	El Dorado County	No	Union Mine

Source:

OTHER UTILITY SERVICES

Utility services include electricity, gas, cable television, and communication facilities. Residents receive their utility services through private companies as the County is not involved in utility services. The availability of these services varies throughout the County. Issues pertaining to utility services in the County include the undergrounding of utility lines; the development of one telephone area code for the entire County; the improvement of existing utility services; and the introduction of new utility services.

FIRE PROTECTION SERVICES

Fire protection services in El Dorado County are provided by 13 separate rural fire districts, one city fire department, the California Department of Forestry, and the U.S. Forest Service. In March 1991, the following fire districts were incorporated to form the El Dorado County Fire Protection District: the City of Placerville Fire Department, the Placerville Fire District, the Pollock Pines/Camino Fire District, the Pleasant Valley Fire District, and Shingle Springs Fire District. The majority of the rural fire districts are primarily staffed by volunteer fire fighters. There are mutual aid agreements between most of the agencies to ensure that adequate manpower and equipment can be provided when a fire occurs. Fire district boundaries are shown in Figure 5-2. The rural fire districts are responsible for structural and wildfire protection as well as medical emergencies in their jurisdictions. Response times can be as quick as one minute in highly urbanized zones to more than 20 minutes in rugged mountain areas such as Echo Summit.

Each district is assigned a rating by the Insurance Service Office (ISO) to determine its insurance costs. Ratings can range from one to ten with higher numbers indicating less protection or lower levels of service. ISO ratings in El Dorado County range from five to ten. The poorer ratings typically occur in areas that are not served by a public water system, areas with insufficient equipment or manpower, or areas with inadequate water flow capacity.

District Profiles

El Dorado County Fire Protection District. The El Dorado County Fire Protection District is the largest district in the County, encompassing 480 square miles. The district serves a population of 56,520 and maintains an ISO rating ranging from five to nine. The 60 full-time fire fighters and 55 volunteers staff a total of 13 stations. The district's equipment includes 18 engines, six squad cars, five water tenders, five ambulances, and one truck/ladder. In 1993 two other districts (Northside and Coloma/Lotus) were consolidated into the District. Their service areas and facilities are not included in the above totals. The specific information for these two added areas include: 1) the Northside area, located in the vicinity of Cool and Pilot Hill, serving an area of approximately 78 square miles and 1,300 residents. There are two stations in the district, with two water tenders, two trucks, three engines and three squad cars. The district has 11 full-time fire fighters and six volunteers. The ISO rating within the district is six, but drops to ten in the rural areas where there are no fire hydrants; and 2) the Coloma/Lotus area which has a service area of approximately 20 to 25 square miles and serves a population of between 2,500 and 3,000. One fire station houses a water tender, three engines, and one medical vehicle. The station is manned by two full-time firefighters, 15 volunteers and four resident volunteers.

El Dorado Hills. The El Dorado Hills Fire Department (El Dorado Hills Water District) encompasses approximately 39 square miles, 2,950 homes, and an estimated population of 8,800 residents. Within the district there are also approximately 60 commercial businesses, four schools, and an industrial/business park. The district operates 2 stations and has 12 full-time firefighters and 18 volunteers. The district's equipment includes one water tender, three engines, and one quick-attack vehicle. According to interview with district staff, the El Dorado Hills Fire District has an excellent general effectiveness rating. Response times in this district average one to five minutes.

Cameron Park. The Cameron Park Fire District encompasses more than 8.5 square miles but serves a population of approximately 15,000. The district has an ISO rating of five. The district has two stations with 18 full-time and ten volunteer firefighters. Equipment includes three water tender trucks, four engines, two ambulances, and a wildland fire truck.

Diamond Springs. This district contains approximately 95 square miles in the southwestern portion of the County. There are five stations in this district, using three trucks, one water tender, two engines, one ambulance, and two quick attack vehicles.

Rescue. The Rescue Fire District serves an area of 34 square miles and a population of approximately 4,500. The district responds to approximately 260 calls annually. There are two stations in this district with two water tenders, four engines, and two squad cars. The Rescue district has only three full-time firefighters and relies on 25 volunteers. The district's ISO rating is seven.

Garden Valley. This district has a service area of approximately 60 square miles of primarily rural area in the Kelsey, Greenwood, and Garden Valley vicinity. The district is staffed almost entirely by volunteers (30) with only one full-time fire fighter. There are three stations in the district equipped with three water tenders, eight tankers, and one rescue truck. The area is characterized as an extremely high fire hazard area, and there is a lack of hydrants throughout the district.

Georgetown. The Georgetown Fire District encompasses approximately 75 square miles with a population of 3,000 to 4,000. The district has four stations with plans for new substations and an update of the main Georgetown station. The district has an ISO rating of five and a Class nine in areas not served by hydrants. The district has a heavy reliance on volunteer firefighters. There are ten paid employees including one chief, one fire fighter mechanic, seven fire fighter paramedics, and a part-time secretary. The department is also manned by 34 volunteer firefighters. Equipment includes one water tender, two trucks, five engines, one squad car, two ambulances, and a snow-cat rescue vehicle.

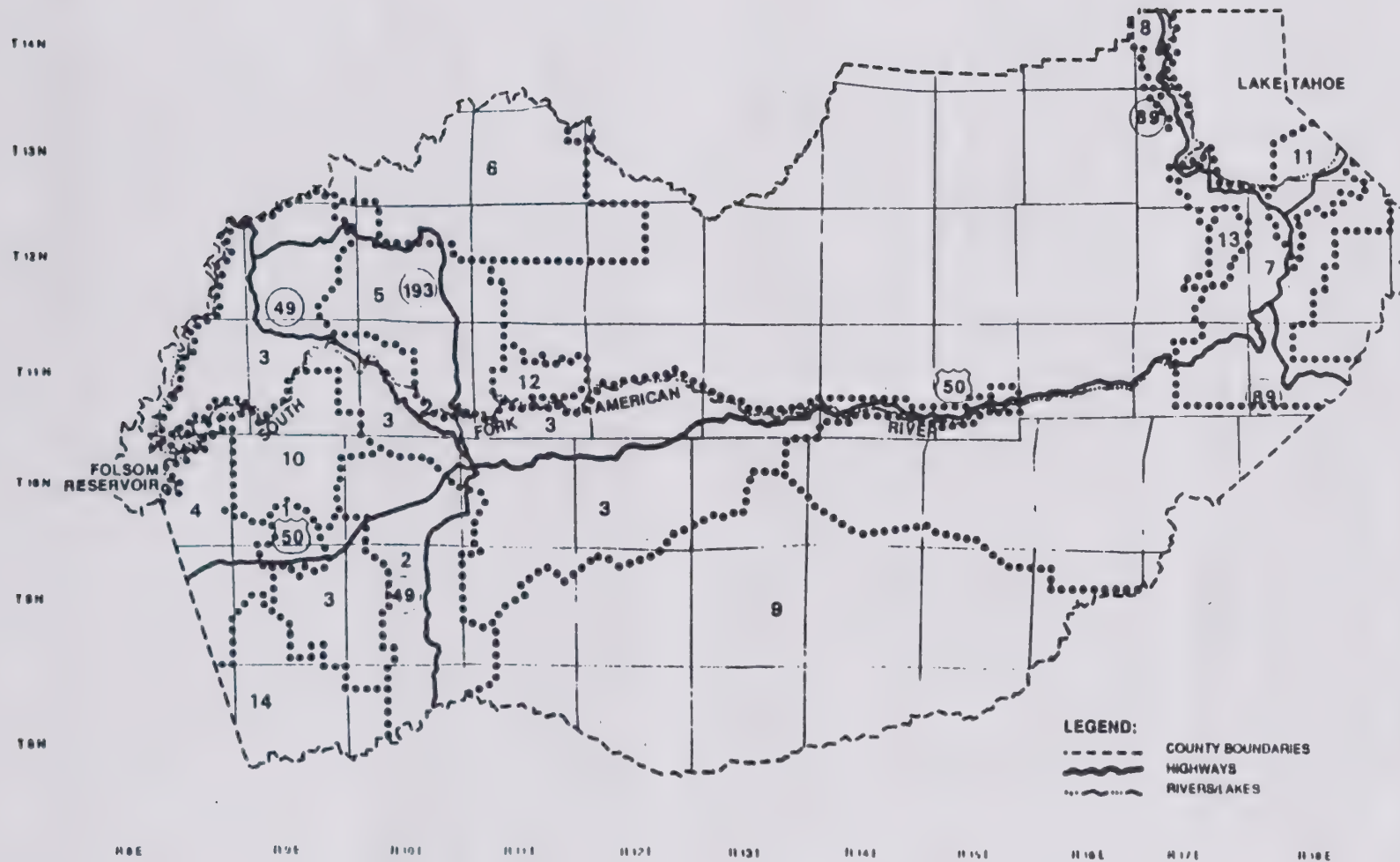
Mosquito. The Mosquito Fire District serves a relatively small, 13 square mile area centrally located in the County. Its one station is equipped with two water tenders, an engine, and a squad car. The district has only one full-time fire fighter and 17 volunteers.

Lake Valley. The Lake Valley Fire District serves an area of approximately 50 square miles in the Tahoe Basin and serves a resident population of approximately 6,000. This district has two stations equipped with three engines, one wildland fire truck, a light rescue unit, and a command vehicle. The district employs 15 full-time firefighters and has 18 volunteers. The district has an ISO rating of six. Response times in the valley area average approximately six minutes, while calls to Echo Summit can take 15 to 20 minutes to respond. The district estimates that 65 percent of all calls are for emergencies, and only ten percent are responses to fires.

Meeks Bay. The Meeks Bay Fire District, located on the west shore of Lake Tahoe, serves an area of approximately 15 square miles and a population of 2,500. During the tourist season, the number of visitors to the district can be as many as an additional 50,000. The district has two stations equipped with a water tender, three engines, and an all-purpose truck and is manned by five full-time firefighters and 17 volunteers. The district has an ISO rating of six.

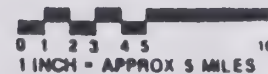
Four other fire protection districts operate within the County: South Lake Tahoe, Latrobe, Pioneer, and Fallen Leaf Lake districts. Information regarding these districts was not available for inclusion in this report.

EL DORADO COUNTY GENERAL PLAN



**Figure: 5-2
Fire Districts**

- 1 Cameron Park Community Service District
- 2 Diamond Spings-El Dorado Fire District
- 3 El Dorado County Fire Protection District
- 4 El Dorado Hills Fire District
- 5 Garden Valley Fire District
- 6 Georgetown Fire District
- 7 Lake Valley Fire District
- 8 Meeks Bay Fire District
- 9 Pioneer Fire District
- 10 Rescue Fire District
- 11 South Lake Tahoe Fire District
- 12 Mosquito Fire District
- 13 Fallen Leaf Lake Fire District
- 14 Latrobe Fire District



State and Federal Agencies

Wildfire protection in the non-Federally owned lands, or State Responsibility Areas (SRAs), is the responsibility of the California Department of Forestry (CDF) while the U.S. Forest Service is responsible for fire prevention and suppression in the Eldorado National Forest and those private ownerships within the boundaries of the forest. Both CDF and USFS cooperate with local fire departments to abate uncontrolled fires. These private lands consist of both residential development and commercial forest lands. The management and protection of national forest system lands are severely impacted by this complex ownership pattern (USFS, 1987).

Within the emergency medical system of the County, CDF in State Responsibility Areas is trained and equipped to respond, by law, to medical emergencies and rescues in order to provide basic life support to injured persons. (PRC 4114)

EMERGENCY MEDICAL/AMBULANCE SERVICES

The medical services in El Dorado County is a complex system linked by communications. First phase: first responders (which may be the fire district), Sheriff's Deputy, California Highway Patrol Officer, or a trained search and rescue crew member. All these personnel provide basic life support. Second phase: transportation provided by ambulance service. Service in the Lake Tahoe basin is provided by a private ambulance company. The West Slope is provided service by County ambulances operated by the fire districts. Ambulance providers have paramedics that provide advanced life support. Third phase: emergency rooms staffed 24 hours a day. All the above operations are, or have the ability to be, linked together either by radio or cellular telephone.

Two hospitals in El Dorado County provide medical services, Barton Memorial Hospital at South Lake Tahoe and Marshall Hospital in Placerville. They provide emergency medicine, surgery, in-hospital care, and intensive care. Other services such as lab work, X-rays, special imaging, etc., are available.

In addition to the in-County medical services provided, emergency air transportation can be obtained for those patients requiring specialized care. Air transportation is provided by several facilities: California Highway Patrol in Auburn, Life Flight from U.C. Davis Medical Center in Sacramento, Care Flight from Reno, and Med Flight from Stockton.

Other medical services provided are skilled nursing facilities (Gold Country Health Center), Placerville Pines Convalescent Hospital, El Dorado Convalescent Hospital, etc. Other care facilities are available that provide care for the elderly and those unable to care for themselves.

LAW ENFORCEMENT

The unincorporated areas of El Dorado County receive general public safety and law enforcement services from the County Sheriff Department. The County Sheriff Department operates a single dispatch center on Fair Lane at the County Government Center in Placerville. Municipal police departments serve the Cities of South Lake Tahoe and Placerville. Since many police matters cross jurisdictional lines, the Sheriff's Department works closely with the City's Police Department.

The department has a total of 260 personnel including 142 sworn staff. There are presently about 1.0 to 1.2 sworn officers per 1,000 County residents compared with the Statewide average of 1.8 officers per 1,000 population. However, comparison with Statewide averages are not necessarily pertinent because of the relatively low crime rate in the County. The demand for law enforcement will inevitable rise as the County grows. Increased population and tourism will need to be matched by new personnel, facilities, and equipment.

SCHOOLS

Current Enrollment and Facilities

Fifteen public school districts, two community colleges, and a number of private schools currently serve the residents of El Dorado County. The public school districts are listed in Table 5-13. Created by the State (as authorized in Article IX, Section 14 of the Constitution of the State of California), school districts are subject to the overview of the State legislature and are entirely independent of the County Board of Supervisors. Budgeting and decision making are done by elected governing boards. Sites and the review of plans and specifications for educational facilities are established by the State Department of Education (Section 39000 of the Government Code), and the State Architect in the State Department of General Services must approve plans and specifications for construction standards (Section 39113 of the Education Code).

Because of the mixture of rural and urban communities within the County and the great distances between districts, the number of schools, the grade levels, and the enrollment vary widely from district to district. Figure 5-3 shows the service areas of the school districts, and Table 5-13 lists the October 1990 enrollments, capacities, and growth potential of each district. The capacity for each school is based on State standards as established by the State Allocation Board. For the 1990/91 school year, as reported on the California Basic Education Data System (CBEDS) in October 1990, there were approximately 18,524 children enrolled in public elementary (grades K-8) schools and 6,517 high school students (grades 9-12) for a total of 25,041 enrolled in public schools in El Dorado County.

All school districts have experienced increasing enrollment in recent years causing many schools to reach or exceed capacity enrollment levels. To increase their capacity levels, most of the districts are leasing or buying portable classrooms in addition to planning for permanent school facilities or new schools. Many of the school districts in El Dorado County are currently participating in the State School Building Program for the funding of new facilities. Currently, the program is oversubscribed and there are waiting lists for the limited funds that become available. To understand the costs associated with school construction, Table 5-14 illustrates the costs of new facilities along with the estimated yield factor and the cost per housing unit to fund schools. These figures are based on State standards as administered by the Office of Local Assistance.

The County Office of Education is a publicly supported local agency with a mandate to operate certain educational programs and provide services to the 15 school districts in the County. The office provides economic, legal, and facility planning services to the following school districts: Buckeye Union, Camino Union, El Dorado Union High School, Gold Oak Union, Gold Trail Union, Indian Diggings, Latrobe, Mother Lode Union, Pioneer Union, Placerville Union, Pollock Pines, and Silver Fork. The three school districts with independent planning and management divisions are: Black Oak Mine Unified School District, Lake Tahoe Unified School District, and Rescue Union School District. In addition to its administrative duties, the County Office of Education administers children's day care and extended day centers, special education and alternative education programs. County programs include a community school, three continuation schools, an Independent Learning Center, an Agricultural Training Program, and a Regional Occupation Program.

The majority of the school districts in the County teach classes from kindergarten through eighth grades (K-8). Students then attend one of three high schools administered by the El Dorado Union High School District. The school districts that are exceptions to this system are Lake Tahoe Unified and Black Oak Mine Unified both of which provide schools that teach grades K-8 as well as a high school and a continuation high school. El Dorado County school districts are shown in Figure 5-3.

EL DORADO COUNTY

GENERAL PLAN

Figure: 5-3
County School Districts

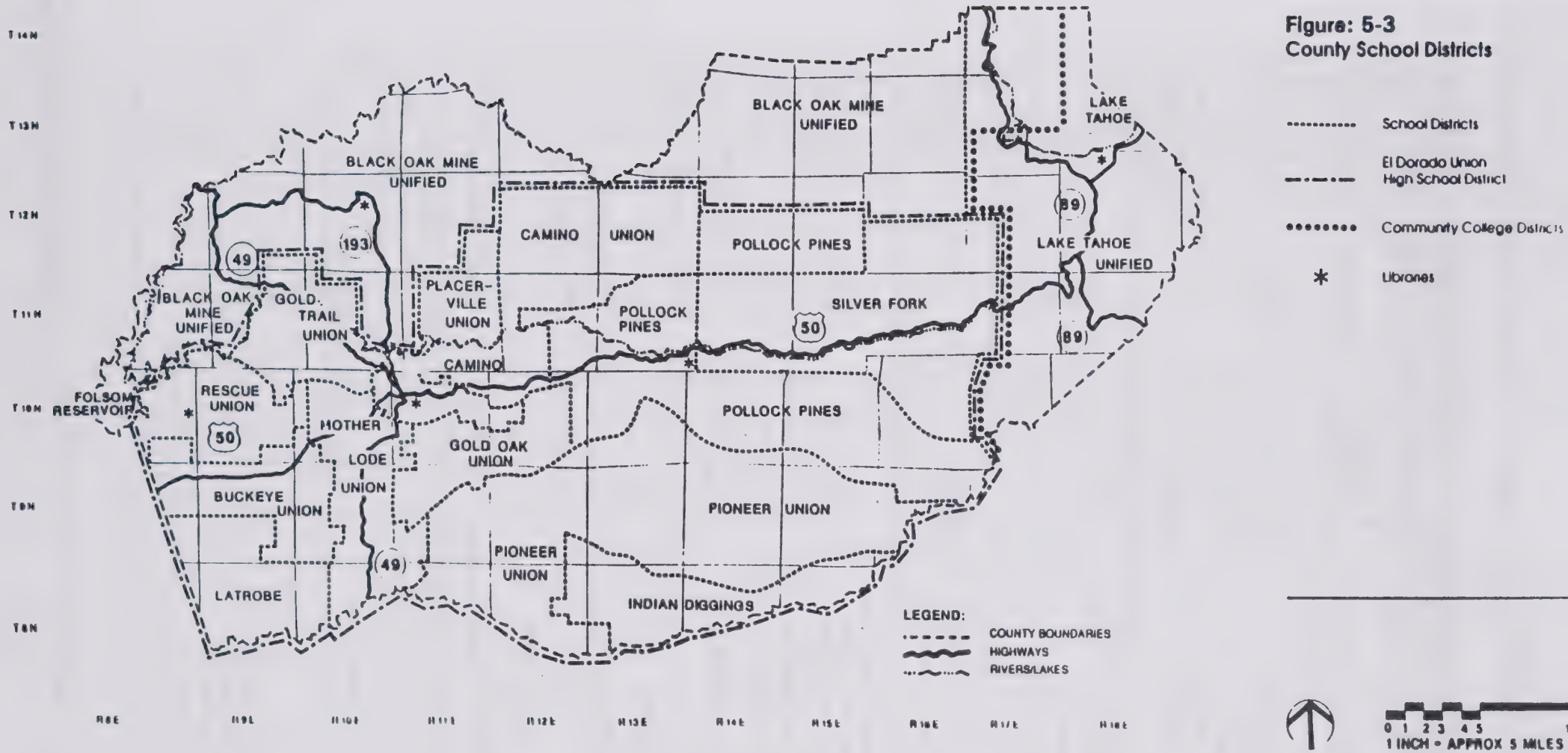


TABLE 5-13
SCHOOL ENROLLMENT IN EL DORADO COUNTY

District/School	October 1990 Enrollment	State Capacity ¹	Space Available (over capacity)
<i>Black Oak Mine Unified School District</i>			
Creskide (K-5)	234	0**	234
Georgetown (K-8)	647	671	24
Northside (K-8)	709	773***	64
Otter Creek (K-5)	19	30	11
Golden Sierra High (9-12)	583	423	<160>
Divide High Continuation	43	60	17
Subtotal	2,235	1,957	<278>
<i>Buckeye Union School District</i>			
Buckeye (K-6)	627	689	62
William Brooks (K-6)	354	623	269
Blue Oak (K-6)	804	602	<202>
Camerado Springs (4-8)	895	588	<307>
Silva Valley	479	596***	117
Subtotal	3,159	3,098	<61>
<i>Camino Union School District</i>			
Camino School (K-8)	564	485	<79>
<i>El Dorado Union High School District</i>			
El Dorado High School (9-12)	1,727	1,228	<499>
Oak Ridge High School (9-12)	1,340	1,232***	<108>
Ponderosa High School (9-12)	1,596	1,108	<488>
Independence High School (9-12)	144	60	<84>
Ponderado Alternative Education Center 86	840	<2>	
Diamond High	7	0	<7>
Independent Learning Center	86	0	<86>
Subtotal	4,986	3,712	<1,274>
<i>Gold Oak Union School District</i>			
Gold Oak (K-6)	600	807	147
Pleasant Valley School (7-8)	370	202	<168>
Subtotal	1,030	1,009	<21>
<i>Gold Trail Union School District</i>			
Gold Trail (K-6)	387	488	101
Sutter's Hill School (7-8)	321	397***	76
Subtotal	708	885	177
<i>Indian Diggins School District</i>			
Indian Diggins (K-8)	34	56	22
<i>Lake Tahoe Unified School District</i>			
Al Tahoe (K-5)	654	565	<89>
Bijou (K-5)	563	598	35
Meyers (K-5)	597	565	<32>
Sierra House (K-5)	476	452	<24>
Tahoe Valley School (K-5)	637	627	<10>
South Tahoe Middle (6-8)	1,228	935	<293>
South Lake Tahoe High (9-12)	1,208	890	<318>
Mount Tallac Continuation	104	0	<104>
Subtotal	5,467	4,632	<835>

TABLE 5-13
SCHOOL ENROLLMENT IN EL DORADO COUNTY

District/School	October 1990 Enrollment	State Capacity ¹	Space Available (over capacity)
<i>Latrobe School District</i>			
Latrobe (K-3)	74	46	<28>
Millers Hill (1-8)	73	54	<19>
Subtotal	147	100	<47>
<i>Mother Lode Union School District</i>			
Charles Brown (K-5)	658	627	<31>
Indian Creek (K-5)	620	503	<117>
Herbert Green (6-8)	610	541	<69>
Subtotal	1,887	1,671	<217>
<i>Pioneer Union School District</i>			
Pioneer (K-8)	751	320	<431>
<i>Placerville Union School District</i>			
Schnell (K-2)	492	439	<53>
Sierra (3-5)	524	541	17
Edwin Markham (6-8)	550	355	<195>
Subtotal	1,566	1,335	<231>
<i>Pollock Pines School District</i>			
Pollock Pines (K-1)	292	66	<226>
Pinewood (2-5)	556	600	44
Sierra Ridge Middle School (6-8)	426	347	<79>
Subtotal	1,274	1,013	<261>
<i>Rescue Union School District</i>			
Green Valley (K-3)	613	316	<297>
Jackson (K-6)	464	569	105
Rescue (4-6)	531	411	<120>
Marina Village Intermediate (7-8)	528	438	<90>
Lake Forest	437	0**	<437>
Subtotal	2,573	1,734	<839>
<i>Silver Fork School District</i>			
Silver Fork	34	35	1
TOTAL	26,416	22,042	<4,374>

¹State capacity is "existing adequate area to house students" as defined by the State Allocation Board.

²As of October 1990, the existing school consists of leased portables for the interim until the State has financing available to build a permanent school. Leased portables are not currently considered when calculating "State capacity."

Source: El Dorado County Office of Education, December 1990

**TABLE 5-14
ESTIMATED SCHOOL COST**

Type	Estimated Cost/School ¹	Number of Students/Project	Estimated Yield Factor ²	Projected Cost/Student	Projected Cost/House Unit to Fund Schools ³
Elementary	\$ 5,834,380	530	0.13	\$ 11,008	\$ 4,293
Middle	\$ 11,478,044	844	0.12	\$ 13,600	\$ 1,632
High School	\$ 25,155,824	1,516	0.23	\$ 16,594	\$ 3,817
TOTAL					\$ 9,742

¹Includes site cost, appraisals, costs incurred in escrow, surveys, architectural fees, OSA/ACU plan check fees, Department of Education fees, preliminary tests, utility services, off-site development, service site development general site development, tests inspection, furniture and equipment.

²Estimated number of students per single dwelling unit. Based on generation factors used in surrounding communities.

³This figure does not include items the district must fund outside the State program, such as buses, bus barns, district administration space, football and track fields, additional furniture and equipment. A district in the greater Sacramento area reports the following shortfalls in the State program: site preparation, 30 percent; building construction, 8 percent; asphalt, 50 percent; furniture and equipment, 50 percent.

Source: El Dorado County Office of Education, December 1990

Private Education

Private school enrollment in El Dorado County is predominantly church-affiliated and accounts for approximately three percent (536 pupils) of the total elementary school (K-8) enrollment and 1.4 percent (75 pupils) of the secondary school (9-12) enrollment in the County (personal communication, Dr. Fernandez, State Department of Education, Private Schools Department, February 1990). The percentage of students enrolled in private schools in the County has remained stable over recent years according to information collected by the State Department of Education. Enrollments of private schools range from one student being taught in a home to enrollments of more than a hundred. No records are kept concerning the capacity of private schools. The percentage of students enrolled in private schools in El Dorado County is much lower than the Statewide figure of approximately 11 percent.

Higher Education

Three institutions of higher learning are located in El Dorado County: a branch of Cosumnes Community College, Lake Tahoe Community College, and a branch of Chapman College. Cosumnes Community College is a two-year public community college serving all school districts in El Dorado County except for Lake Tahoe Union School District which is served by Lake Tahoe Community College. The private Chapman College which has its main branch in Southern California maintains a campus in Diamond Springs.

Cosumnes River Community College in Placerville is a satellite campus of the main campus in Sacramento. The community college campus in Placerville has been located in portable buildings adjacent to the County Fairgrounds since the late 1960s. The campus facilities are at maximum capacity with a 1990 enrollment of approximately 2,500 students. The college offers 24 programs of study in general education, vocation/technical degrees, and full transfer programs. The college currently offers off-campus classes at a number of different locations. According to Marc Hall, president of Cosumnes River College, the Placerville facility has experienced a 40 percent growth rate in enrollment since 1984. It is projected that the growth in the student population will lead to demand for additional college facilities. A new campus facility for Cosumnes River Community College is being constructed on Green Valley Road, and classes are scheduled to start there in the fall of 1992. The new campus will be able to accommodate about 4,000 students. If enrollment growth continues, long-range plans for the college call for a parallel college facility in Folsom that would accommodate about 12,000 students.

Lake Tahoe Community College campus is located in the City of South Lake Tahoe. The college moved to the new permanent campus in October 1988. Approximately 2,200 students were enrolled at the campus for the 1989/90 school year. The new campus can accommodate 400 students at one time, and additional buildings are being planned. College courses include general education, vocation/technical degrees, and full transfer credit programs.

Chapman College is a branch of the private Chapman College and is located in a small office building in Diamond Springs. The main campus of the college is in Orange, California. Chapman College is the only four-year college in El Dorado County where students can earn degrees in psychology, health and social sciences, education, and business. There are approximately 80 students currently attending classes at the college, and there are no plans for expansion.

District Profiles

Black Oak Mine School District, as of October 1992, has an enrollment of 1,609 kindergarten through eighth grade students, 583 high school students, and approximately 43 continuing education and independent study pupils. Facilities within this district are Northside, Georgetown, and Creekside elementary schools; Golden Sierra High School; and Divide High School. Since the mid-1980s, the Georgetown Divide area has experienced a steady rise in housing starts and a strengthened local economy, resulting in rising enrollments. Were the Auburn Dam project implemented, it would have the most dramatic effect on the Georgetown Divide area. It is projected that growth would increase dramatically in response to the construction of the Auburn Dam and in conjunction with a bridge linking Auburn to the Georgetown Divide area (Demographic Analysis 1988, prepared by Peter M. Feild, April 9, 1988).

Buckeye Union School District includes the rapidly growing communities of El Dorado Hills, Cameron Park, and Shingle Springs. Students in this district attend one of four elementary schools: Buckeye, Brooks, Blue Oak, or Camerado Springs with a combined enrollment of 2,680 students. The district is at capacity; based on housing projections, the district expects an additional 1,468 students by 1995. The district has begun to implement a multi-track, year-round education schedule (YRE) to increase the student capacity of existing and future school sites within the district. Currently, Blue Oak School is operating on a dual-track YRE schedule. A new school, Silva Valley School, was completed in 1992 and has a capacity of 596 students. The YRE schedule also will be implemented at this school. In addition, a new elementary school is expected to be constructed by 1995.

Camino Union School District serves the community of Camino; the Camino School (K-8) has an enrollment of 564 students. There is currently a severe shortage of sufficient classroom space in the school, and many students are housed in portable classrooms. Using State Department of Education figures, it is estimated that by the year 2010, additional capacity to house 487 students will be needed. The school district has recently acquired a 12-acre site adjacent to the existing school site for the purpose of constructing a new middle school which will have the capacity to house approximately 210 students. It is anticipated that the new middle school will be constructed within the next five years. It is unlikely that the school district will acquire any additional sites during the next 20 years. In order to house the increase in the student population, additional classrooms and facilities will probably be constructed on the existing sites.

El Dorado High School Unified School District. Currently, students from 12 elementary districts "feed" into the El Dorado High School District where they attend one of three comprehensive high schools: El Dorado, Oak Ridge or Ponderosa which had a combined enrollment of 4,663 in October 1992. The Diamond Continuation High, Independent Learning Center, Ponderado Alternative, and Independence Continuation schools are small alternative school programs also administered by this school district. Enrollment in these programs equalled 323 students as of October 1992. The school district has a total enrollment of approximately 4,986. Enrollment for the high school district has been growing steadily since 1983 except for a slight dip in enrollment in 1986 (Goldfinger, 1989). Prior to 1983, growth did not occur at such a rapid rate. Growth is expected to continue based on the number of students now in grades K-8 (the "echo" of the baby boom), the high level of residential development, and in-migration of residents projected for the Western Slope. From 1990 to 1996, an annual growth of 500 of 600 pupils is expected. After 1996, increasing enrollments are expected to be more moderate (Goldfinger, 1989).

The most highly impacted school in this district is the El Dorado High School which has exceeded its maximum capacity. Further expansion of this facility is unlikely because additional space for expansion is not available on the site. There is room for expansion at the Ponderosa and Oak Ridge campuses, especially Oak Ridge. However, by 1993, it is projected that all three schools will significantly exceed capacity if projected trends are realized. Additionally, by June 1993, the district is expected to have exhausted all currently known sources of financing for building out their campuses to their land capacity.

Transportables and trailers are in use at all of the campuses to accommodate increasing enrollments. In the future, using portables as temporary classrooms to house students may not be an available option. State legislation, AB 235 (Chapter 92, Statutes of 1988) allowed the use of trailers for K-12 classrooms up until September 1, 1990, with an accompanying waiver from the State Allocation Board. Based on the three criteria used by the State Office of Local Assistance (existing space, projected enrollment, and priority points), the district is eligible for State funding to build two more high schools over the next seven years. The district has already acquired a 32-acre site for one school.

If funding to build these two schools were available, the district's Master Facilities Plan and time lines would be able to accommodate all of the anticipated growth in enrollment. The district is primarily dependent on State funding to finance these two new needed high schools. Without that funding, no new school can be built; and the projected increasing student enrollments will substantially over crowd existing schools. Currently, and for at least the next four or five years, it appears that the State will be oversubscribed.

In anticipation of this, the district has been intensively working to increase financing for new schools from sources outside the State Schools Facilities Funding Program. There are only two other funding sources: a tax passed by two-thirds of those voting, and financing through agreements by developers and builders. Thus far, adequate financing from these two sources has not been realized.

Gold Oak Union School District has only two schools with an enrollment of 1030 students and a planned capacity of only 885 students. This district serves the community of Pleasant Valley. An additional 199 students are expected by 1995. Some of these new students and the existing 321 middle school students are expected to be housed in the Gold Oak Middle School which was completed in 1991. The State is funding this project and has required the collection of developer fees as a condition of that funding, where appropriate. Additionally, elementary school students will be housed in an expansion of the existing elementary school which is currently being planned.

Gold Trail Union School District consists of two schools at this time, the Gold Trail Union School with an enrollment of 387 and the Sutter Hill School, with an enrollment of 321. Shortage of adequate classroom space in the district has necessitated the housing of many students in portables.

Indian Diggings School District, one of the smallest school districts in the County, is composed of one school with an enrollment of 34 students. The district expects a very slow, gradual increase in student enrollment, and there is ample space at their present site for additional facilities. Currently, no portable classrooms are in use or needed in this district.

Lake Tahoe Unified School District has one of the largest student enrollments of the 15 districts with 5,467 pupils attending its seven schools as of October 1992. Facilities include Al Tahoe, Bijou, Meyers, Tahoe Valley, and Sierra House elementary schools; South Tahoe Middle School; Mt. Tallac Continuation School; and South Lake Tahoe High School. In 1988, the school district contracted with Community Development Information Services to study demographic trends in the district. The result of this study was the *Lake Tahoe Unified School District Enrollment Study and Facilities Plan Update, January 1989*. Much of this section summarizes that report.

The district has experienced an enrollment increase that has led to overcrowding at all grade levels. Overcrowding at the elementary level was alleviated by transferring sixth grade classes to the middle school. The district has received 13 portable classrooms through the State Emergency Classroom Program and is currently applying for two more State Emergency portable classrooms.

To house projected enrollment growth for the next five years, some schools may operate on a year-round schedule. If the district decides to maintain a conventional schedule, portable classrooms can house most of the projected growth for the next five years and will provide flexibility as the school population ages. The growth in enrollment appears to have been caused primarily by significant immigration of new families associated with hotel employment and, secondarily, by the maturing of the resident local population resulting in an increased local birth rate. South Tahoe Middle School and South Tahoe High School have the most severe overcrowding problems because larger class sizes are transferring in from the elementary schools. Overall, the school district predicts long-term growth in the district's school-age population because of growth in the average household size.

Latrobe School District is one of the smallest districts and has a current enrollment of 147 students housed in Latrobe School (K-3) or Millers Hill School (1-8). The addition is designed to house both currently unhoused students and the additional 114 new students expected between 1990 and 1995.

Mother Lode School District is in the southwestern portion of the County and is composed of three schools: Charles Brown (K-2), Indian Creek (3-5), and Herbert Green (6-8). The district is currently at capacity with an enrollment of 1,888. Many students are housed in portable classrooms. A new school is currently in the planning stage, but a site has not been selected.

Pioneer Union School District has an enrollment of 751 kindergarten through eighth grade students who attend Pioneer School which has a capacity of 325 students. The majority of students are housed in the 17 portable classrooms currently installed at the site. A new middle school was recently completed. The middle school is located immediately south of the existing campus. A second elementary school is also being planned.

Placerville Union School District has an enrollment of 1,566 kindergarten through eighth grade students. Facilities within this district are Schnell and Sierra elementary schools and Markham Intermediate School. This district is currently at capacity and has installed portable classrooms on each of the campuses. Placerville has a growth projection of 100 new students per year for the next five years and then expects a smaller but steady increase in enrollment over the next several years. The district is currently studying the options of continuing to buy portable classrooms, raising money for a new school, or instituting year-round school.

Pollock Pines School District is one of the larger school districts and has a total enrollment of 1,274 divided among Pinewood and Pollock Pines elementary schools and Sierra Ridge Middle School. The district serves the community of Pollock Pines. All of the campuses are currently over capacity, and most students are housed in portable classrooms. Approximately 330 new students are expected in this district between 1990 and 1995. To address the overcrowding of facilities, a new elementary school and an expansion of the Sierra Ridge Middle School are in the planning stages; and construction will begin as soon as funding sources can be established.

Rescue School District currently consists of Green Valley, Jackson, and Rescue elementary schools, and Marina Village Middle School and Lake Forest School which is a portable starter school. The October 1992 enrollment was 2,573. The district is experiencing a high growth rate. According to David Guthrie, Chief Fiscal Officer for Rescue Union School District, enrollment in the district has doubled over the past ten years; and it is projected to double again in the next ten. The need for additional school facilities is critical. The district has kept up with growth by adding portable classrooms to the existing campuses, and nearly half the district's classrooms are now portable. Lake Forest School was made possible in part by the advancement of developer fees from the Lake Forest subdivision surrounding the school site. However, State funds will still be needed to complete the project. The district is currently studying the possibility of implementing year-round school.

Silver Fork School District is in the central portion of the County. Surrounded by Eldorado Forest land, Silver Fork School District is the smallest district in the County. The district is composed of the Silver Fork School which had an enrollment of 37 students as of October 1990. Because there is very little growth in the community, there are no plans for expansion or additional facilities at this time.

Funding Sources

The primary source of funding for the construction of educational facilities is the State of California. Using monies from bonds, the State government allocates money based on relative need to school districts throughout California to reconstruct, remodel or replace existing school buildings, and to acquire new school sites and buildings.

The money that school districts collect from their share of the property tax and from State support which is based on average daily attendance figures is used primarily for salaries, maintenance, and other operating expenses. Consequently, very little of it remains to fund facility construction. The funds that districts receive from the State lottery cannot be used for capital expenditures; moreover, they contribute only a very small percentage of school districts' operating budgets.

A variety of funding mechanisms for new elementary school construction are available at the State and local levels; however, competition for available money is very intense. Following is summary of potential State and local sources of funds available for school district improvements.

State Funding Mechanisms

The State of California provides financial assistance for construction of local schools through several programs. Funding is administered by the State Allocation Board.

State Schools Building Program. The Leroy F. Greene Lease-Purchase Law of 1976 (as amended 1987) provides the most significant potential source of construction financing for permanent and temporary school facilities. The funds for this program are provided through the sale of State general obligation bonds and the revenue generated from State tideland oil and gas royalties. Funds appropriated for school construction are distributed by the State Allocation Board on the basis of need. However, there is intense Statewide competition for these funds. It is estimated that school facilities' aid under the Greene Act provides for only 25 to 35 percent of the funding needed for school facilities each year (South Lake Tahoe Report, January 1989).

Emergency Classroom Act. Under the Emergency Classrooms Act, the State Allocation Board may purchase portable classrooms and lease them to overcrowded school districts. The lease income is used to buy additional classrooms. However, other school facilities such as libraries, playing fields, and bathrooms may still be overcrowded. Using portable classrooms provides districts with flexibility because they can move the classrooms when overcrowding is eliminated or the large class of students moves on through the system. To qualify for this program, a school district must have exceeded the enrollment capacity of all rooms designed for classroom instruction.

Year-Round Schools. Since 1983, the State has authorized incentive payments to schools districts that operate year-round schools as an alternative to new school construction. Year-round school entails implementing a rotating schedule of classes where two-thirds or three-quarters of the students would be attending school at any given time, and the remaining students are on vacation. Instituting year-round school can increase enrollment capacity by an average of 25 percent (Community Development Information Services, 1989). Legislation passed in 1987 requires districts to study the feasibility of operating year-round schools as part of their facilities planning process and makes it a condition of receiving priority consideration for funding from the State Allocation Board after 1990. As of January 1, 1990, any school district with more than 300 students must submit a year-round feasibility study showing that 30 percent of the district's K-6 student population will be on year-round schedule by July 1, 1992, to be

in the running for new school facilities State funding. Year-round operation requires the scheduling of major maintenance and repair operations around continuous class schedules, and the costs of maintenance and operation will be increased. However, these costs are offset by reduced capital outlays for construction and maintenance of additional facilities.

Local District Funds

Development Impact Fees. New legislation passed in 1986 (AB 2926 [Government Code S65995(b)]) authorized school districts to directly levy fees on new residential and commercial/industrial construction. Prior to January 1, 1987, only cities and counties could assess and collect school impact mitigation fees for school districts. Now, districts can directly assess and collect fees. In 1990, the maximum that elementary and high school districts could jointly collect was set at a maximum of \$1.58 per square foot of habitable space in new residential buildings and \$0.26 per square foot of commercial and industrial space. These maximum values are adjusted every two years to take the increase in construction costs into account. In 1992, the legislature passed SB 1287 which increased the amount schools can collect by one dollar. The 1993 rate collected by most districts is \$2.65 per square foot for residential and from \$0.19 to \$0.26 per square foot of commercial and industrial space. SB 2068 (Education Code S17705.5) requires school districts to reimburse the State for construction funds received under the Greene Act in amounts equal to the maximum fees the districts can collect under AB 2926 from the time an application for State funding is approved until construction is completed.

Imposition of commercial and industrial fees requires a finding by a school district that the construction of industrial, commercial, or residential facilities causes an impact on school enrollment. Legislative clarification in 1987 requires school districts to demonstrate a clear relationship between new development subject to these fees and growing enrollment that requires fees.

SB 201 Fees. Until 1987, school impact mitigation fees, authorized under SB 201, were a common source of local funding for short-term classroom needs. Many districts have relied on these fees to provide interim classrooms during permanent school planning and construction. Authority for the levying of SB 201 fees was supplanted by the authority to levy development fees under AB 2926.

Mitigation Fees and Development Agreements. Under the California Environmental Quality Act (CEQA), a developer of new residential or employment-generating commercial or industrial property may be required to pay fees to mitigate the impact of development on schools or other public services. School districts can enter into agreements with developers specifying the amount of fees and the method of payment to mitigate school impacts. Approval of the proposed project by the City or County having jurisdiction must be conditioned on payment of the mitigation fees if the school district is to qualify for collection of mitigation fees. In addition, the impact on schools of a specific development must be identified in the environmental review process. The City or County having jurisdiction must consider the adequacy of school facilities during the General Plan amendment process.

Dedication of Property. Through a development agreement, a school district may require or accept dedicated property from a developer for future school construction in lieu of payment of school impact mitigation fees. This option is often attractive to districts needing new school sites to serve new development but not having the financial resources to buy property. A district participating in the State assistance program should have approval of the State Allocation Board to accept the property in lieu of cash for the local match of State funds to avoid losing State funding for site acquisition.

Community Facilities Act (Mello-Roos). Section 5311 *et. seq.* of the Government Code permits local governments including school districts, to form a Community Facilities District for which bonds may be issued and backed by levying special taxes. The bond financing may be used for any public facility needed, such as roads, fire stations, or schools. Formation of a Mello-Roos District requires approval of two-thirds of the electors in an inhabited district or approval of the owners of two-thirds of the land in an uninhabited district. School districts in need of immediate financing to build or rehabilitate facilities may issue bonds while applying for State funding under the Greene Act. If bonds receive voter approval, they may be used to expedite construction. If subsequent funding under the Greene Act is received, the proceeds may be used to retire the bonds.

Special Taxes. Article XIII B of the California Constitution (created by Proposition 13) permits school districts and other local agencies to levy "special taxes" with approval of two-thirds of the voters in the jurisdiction where the tax will be collected. Special taxes, if approved, can be used for any authorized purpose of the district, including the retirement of bonds.

Surplus Property. School districts owning surplus properties are permitted to sell or lease those properties as a source of revenue. A school district may not be eligible for State funding for school construction if it owns surplus sites. If a school site is purchased with State funds, a school district will be liable for non-use payments if the site is not used for educational purposes within five years.

Other Sources. Other sources of funding for school facilities include lease-revenue bonds, general obligation bonds, certificates of participation, tax increments from redevelopment agencies, and the sale or lease of surplus property. Additional fees or special taxes also may be imposed through the land use planning process to ensure adequate school facilities are available to accommodate increased growth.

LIBRARIES

The El Dorado County Library was established in 194, primarily as the result of the efforts of the Friends of the Library, the first such organization formed in California. The Main Library was housed in several temporary locations before the construction of its present facility in the Placerville Government Center in 1978 as a result of a Federal revenue-sharing grant. The mission of the El Dorado County Library is to acquire, organize, and provide access to a wide variety of educational, informational, and recreational materials to children and adults in the community.

The El Dorado County Library operates as a department of the County of El Dorado. The Library Commission makes recommendations concerning the budget and community needs and acts in an advisory capacity to the Board of Supervisors and to the County Librarian. The library participates in State and Federal programs through the California State Library network and through regional systems and networks such as the Mountain-Valley Library System.

In addition to the Main Library in Placerville, there are smaller facilities in South Lake Tahoe, Pollock Pines, Georgetown, and in El Dorado Hills at the Oak Ridge High School campus.

Facilities

The Main Library, built in 1978, is the heart of the El Dorado County Public Library System. The building consists of 37,800 square feet of which 23,400 square feet are currently occupied by the library. The building is designed to hold a maximum of 164,000 volumes and includes facilities for children's story hours and a public meeting room. Centrally located in Placerville, the Main Library has adequate parking and handicapped accessibility. In addition, the local transit district provides service to the Main Library several times a day. The Main Library is currently open five days a week for a total of 44 hours. However, a recent survey indicates that users would like evening hours extended past 8 p.m. because many people are working or otherwise unable to come to the library with its present schedule of Tuesday through Thursday 10 a.m. to 8 p.m., Friday and Saturday 10 a.m. to 5 p.m. Since 1989, the library has been open an additional day and extended the hours of operation.

The Main Library serves as the area specialist for El Dorado County local history and genealogy sources. The library maintains a rare book collection of these materials and receives many reference questions, both in person and by mail, for information on local history and personages. In addition, the Main Library houses the largest reference collection in the El Dorado County Library System. The Main Library purchases many reference materials and magazines to support local school/college assignments as well as business and legal questions. However, the funds available in the library book budget are not sufficient to improve the reference collection because of the expense of reference materials and the increasing demand for more sophisticated materials.

The Main Library offers several children's pre-school story hours each week as well as holiday and seasonal programs, an annual family music series, and an active summer reading program. In July 1989, the Main Library began circulating videos, having become a member of a cooperative video circuit. In the first nine months, an average of 650 videos were checked out each month.

The Technical Services Division of the Main Library suffers from a severe lack of space which has been exacerbated by the conversion of storage space to a mainframe computer room. The problem will accelerate as the division prepares and stores materials for the new Cameron Park Branch Library and as additional materials are ordered and processed.

The Georgetown Branch Library occupies 1,095 square feet in an 1860s era storefront leased from a resident of the community. The present lease agreement is renewed every three years. The library is located on Orleans Street in downtown Georgetown. Although considered a central location initially, many of the businesses have moved from the Main Street area, and the library is no longer within the community's daily traffic pattern. In addition, there is very limited parking on Main Street, and the traffic flow is awkward. The branch does not have handicapped access.

The Georgetown branch, staffed by one person, serves primarily as a neighborhood library. This small branch is extremely cramped. There is no room for a children's area, comfortable seating for studying, extensions to the book and magazine collection, or special programs. The branch holds a maximum of 12,000 volumes, and books are constantly withdrawn to make room for new materials. Rotated books and book requests are filled through weekly County courier delivery service. At some point, a second courier delivery will be needed.

The library is open 33 hours a week, Monday through Friday. This branch offers a weekly pre-school story hour and a summer reading program for children. Some adult programs have been sponsored by the local Friends of the Library and are held after the library closes. In an effort to increase library usage, the library plans to adjust the hours of operation to include Saturday hours and will eliminate some weekday hours.

Most branch patrons are from the Georgetown/Garden Valley area. Although this branch should provide service to the Cool area, State Library reports show a steady increase in the number of Cool area residents using the Auburn-Placer County Library. Comments from some of these residents indicate that they find more amenities in Auburn and do not travel to Georgetown just for library service.

Pollock Pines Branch Library was constructed in 1961 and resembles a mountain cabin. It contains 1,242 square feet of area. This branch was entirely funded, constructed, and furnished by community residents then donated to the County for operation. The branch consists of one room and is staffed by one person. All available space is fully used at this branch, and there is no space for expansion. This branch has just four parking spaces and does not meet handicapped accessibility codes.

The Pollock Pines Branch Library has a small reference collection with more difficult or complex questions being referred to the Main Library ten miles away. There is a growing number of school assignment reference questions as the number of students using the library increases; but there is no room to expand the reference collection. In addition, a children's story hour area is needed. Currently, pre-school story hours are offered once a week before the library opens to the public. Weekly County courier delivery service provides requested books for patrons as well as rotated books. A second courier delivery will be needed soon to keep up with increased activity.

The growth of the community, especially young families, has increased usage of the branch library with a corresponding demand for more children's books. The library also serves a large senior citizen population. As the demographics of the community change and there is more demand for a larger collection and library programs, it is anticipated that a larger facility may be needed.

South Lake Tahoe Branch Library is 12,000 square feet in area and was built in 1983. The South Lake Tahoe Branch Library, the second largest branch in size, has a permanent staff of four and several extra-help positions. The library serves a population of 26,000 permanent residents and a large seasonal populace including part-year residents and vacationers. The vacation status of the Tahoe community results in more maintenance and security problems than found in the other County libraries. The branch's location next to a public campground accelerates the security problem since many people staying in the campground get a temporary card while visiting to check out library materials.

The South Lake Tahoe Branch Library is open 37 hours per week, Monday through Saturday. The branch works cooperatively with the community college to borrow magazines and to fill reference questions. Weekly courier service supplies books and other materials to this branch.

The South Lake Tahoe Branch Library provides the full range of library services including videos, audiocassettes, children's programs, and an adult literacy tutoring program. In addition, the library houses the Tahoe Collection -- approximately 6,000 local, State, and Federal documents pertaining to the Tahoe Basin and environment. Many of these materials are unique documents, available only at this branch, and are used by environmental groups and agencies from all over the country. These materials are for reference use only, and access is provided by branch staff.

The library is collecting a growing number of Spanish language materials to meet the increasing number of requests. The literacy program refers many foreign-born patrons who need assistance learning English since the adult literacy program is designed for those with English as their primary language. It is anticipated that the need for more foreign language materials will increase as the population becomes more ethnically diverse.

Oak Ridge Joint-Use Library was built in 1983 when the County entered into an agreement with the El Dorado High School District to cooperatively fund the construction of a library on the campus of Oak Ridge High School located in El Dorado Hills. The ten-year contract supplies the County with 578 square feet of space for County library materials and requires the County to reimburse the school district for an employee to keep the library open 24 hours beyond the school day schedule. The joint-use library combines high school materials, including videos and audio-visual equipment not available at the other County library branches, with County library materials.

The branch consists of one large room with approximately 5,800 square feet of space. There is no private space for quiet reading because most of the space is dedicated to tables for studying. There is a small alcove housing children's books. The library is staffed during the day by the high school librarian and several clerks and in the evenings by a library assistant. Weekly deliveries by the high school librarian provide new and rotated materials for the branch collection. The high school library and County library book budgets are both used to purchase materials for school and public library patrons.

The large number of families and the increase in population in El Dorado Hills and Cameron Park have resulted in a steady increase in branch circulation and demands for library materials. Children's books and services are requested most frequently. The Main Library provides a children's librarian once a week at the Oak Ridge Joint-Use Library for a pre-school story hour attended by an average of 30 children per week. During this time, the library is cleared of high school students which makes scheduling and use of the facility awkward.

Services

Each El Dorado County Library facility provides the following services:

Circulation Services involve issuing library cards, checking out materials, filling patron requests, assisting users with questions, processing magazines and newspapers, and shelving books.

Children's Services involve conducting story hours and book-related programs that promote reading and teaching children and young people how to use the library.

Reference Services involve assisting patrons in the use of the library and using library resources to answer a wide range of patron questions.

Technical Services, available only at the Main Library, involve ordering, cataloging, and processing new materials, discarding outdated materials, and operating manuals and automated systems for all the library facilities.

Literacy Services, available at the Main Library and the South Lake Tahoe Branch Library, is a confidential one-on-one tutoring of adults who have reading difficulties.

Library Use

As of June 1989, there were 47,032 cardholders in the County-wide library system, a 9.6 percent increase over 1988. Although residents of all ages use the El Dorado County libraries, there has been an increase in the number of patrons 60 years and over. There has also been an increase in the number of children who use the libraries and attend programs at the Main Library and the Oak Ridge Library.

Because of size and staffing constraints, schools serving El Dorado County provide an inadequate level of school library service (Marilyn Crouch, Director of Library Services, personal communication, March 1990). Most of the school libraries, including the library at the Cosumnes River College-Placerville campus, are small. As a result, the library, particularly the Main Library, provides service to a large student population.

Collection and Circulation

Collection. The library collection consists of books, videos, magazines, audiocassettes, pamphlets, and California documents. The library's most popular materials are new books and best sellers, paperbacks, video recordings, and magazines. The number of volumes and magazine titles are listed by branch in Table 5-15.

Circulation. Circulation in all the libraries, with the exception of the Georgetown Branch, has increased during the fiscal year 1988/89. Circulation at the Main Library for fiscal year 1988/89 was 303,176, a five percent increase over the previous year. For fiscal year 1988/89, the Georgetown Branch circulation was 18,227, a 600-item decrease from the previous fiscal year. The Pollock Pines Branch Library circulated 15,350 materials in fiscal year 1988/89, a ten percent increase in circulation that appears to be the result of adding an additional day of operation which began in September 1989. For fiscal year 1988/89, the South Lake Tahoe branch circulated 76,909 materials, an increase of five percent over the previous year, and the Oak Ridge Joint-Use Library circulated 30,540 materials, an increase of four percent. Because of the manual circulation procedures at the Oak Ridge branch, it is impossible to know accurately how much of the circulation is from student use and how much from public library patrons. Based on summer and vacation period use, it is estimated that 44 percent of the branch circulation is from public library patrons.

**TABLE 5-15
LIBRARY COLLECTIONS**

Branch	Volumes	Magazine Titles
Main Library	110,966	230
Georgetown	12,000	10
Oak Ridge Joint-Use Library	6,000 (County) 15,000 (School)	20
Pollock Pines	13,000	24
South Lake Tahoe	34,500	49

Source: Marilyn Crouch, Director of Library Services, March 1990

Future Services

Cameron Park Branch Library

A 12,528 square foot library is currently under construction next to the Cameron Park Community Center. This branch is funded by a State Library Title II grant of \$525,154 and local appropriations totaling \$1.2 million of County funds. The branch will serve the communities of Cameron Park, Rescue, and Shingle Springs and is designed to accommodate a population of 25,000 with one-half square foot of library space per capita per the State Library recommended guidelines. This branch will provide the full range of services offered at the Main Library including books, videos and cassettes, a children's section, and reference collections. It is anticipated that the library will be staffed by five full-time employees plus extra help and will operate six days per week. According to the construction schedule, this branch should be open in 1993.

The new Cameron Park Branch Library may have an impact on the usage of the Oak Ridge Joint-Use Library although the El Dorado Hills community is growing so rapidly there will continue to be a need for a library in that community. Until the Cameron Park library opens in late 1992, a determination as to whether to renew the lease with the school district cannot be made.

Bookmobile

The bookmobile was cut from budget in 1978, and the County library does not currently provide mobile service. However, the library is receiving more and more requests for library service in outlying areas; and the library administrative staff is investigating the possibility of beginning bookmobile service for the Cool and the Pleasant Valley/Somerset areas.

Use Trends

The number of patrons 60 years and over who use library services is expected to continue to increase because of the general aging of the population as well as the increasing number of people who have chosen to retire in El Dorado County. Additionally, the number of children using the library are expected to increase because of the number of young families who have moved to the relatively affordable housing market on the Western Slope.

New Technologies

Library services in the decades ahead will be influenced by changes in the publishing industry and the need to teach basic literacy skills. In addition, changes in school curricula and teaching methods and the growing ethnic and racial diversity in the population must be considered in planning library services.

The library has a state-of-the-art automated system that combines a checkout system, an on-line catalog, and an interface with a national database for both cataloging and inter-library loans. A dial-up catalog for patrons to use from their homes also exists. This service is available for library users who have a modem and personal computer at home or work.

Financing

As the County population grows, there will be increasing pressure for the library to expand its collection in many areas. Currently, new material, especially children's books, is in demand. In addition, many sections of the adult non-fiction and reference collections need to be updated or expanded to reflect an increase in demand for business and technology books. Unfortunately, further expansion will be difficult because of the lack of sufficient funding. For the 1989/90 fiscal year, the El Dorado County Library Materials Appropriation was \$7.50 per capita while the California State Library recommended expenditure per capita for library materials is \$14.78.

To maximize the materials budget, the branch libraries rotate several copies of new books and best sellers among the branches so that each library receives some new books for three months and then sends them on to the next branch in the rotation. This system has the advantage of constantly providing a wide range of new books for smaller libraries having very limited shelf space while purchasing only a small number of permanent new books.

Summary

Five County libraries serve the needs of El Dorado County. In general, library use, especially by patrons over 50 and children, is increasing. Because space and funding is limited, library administrators use many methods to maximize the budget and keep new materials circulating throughout the system.

However, based on American Library Association Standards, the El Dorado County Library system does not have enough books to serve County residents. The American Library Association recommends that libraries serving smaller populations provide four volumes per capita. Based on a County population of 130,000, the library only has 176,466 volumes or 1.36 books per person. The library system needs to grow and find sources of funding in order to better serve the growing population of the County.

MEDICAL SERVICES

Marshall Hospital is the largest medical services provider in the Western Slope of El Dorado County. Located in Placerville, Marshall Hospital has been operating for more than 32 years. The hospital includes 90 beds, 162 staff physicians (including 44 consulting physicians), ten dentists, 34 emergency-room doctors, and three podiatrists. Another 717 hospital staff members support the professional medical staff. Barton Memorial Hospital provides medical services to the residents of El Dorado County's Eastern Slope. The hospital has 81 beds, 73 staff physicians, and 350 support employees. Several convalescent hospitals are located in El Dorado County as well. Each has more than 100 beds and a ratio of staff to beds of nearly one to one.

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Chapter 6

PUBLIC HEALTH, SAFETY, AND NOISE

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Chapter 6

PUBLIC HEALTH, SAFETY, AND NOISE

EMERGENCY PREPAREDNESS AND PLANNING

There are two levels of emergency planning: 1) the day to day provision of emergency services to individuals, or groups of individuals due to accidental circumstances; and, 2) those emergencies that require resources beyond every day functions of governmental support to protect populations and their property following a cataclysmal event such as a major fire, flood, earthquake, chemical spill, multi-car accident, war, nuclear accident, etc.

Day-To-Day Services

Basic police (sheriff), fire, and emergency medical services are provided by the agencies below coordinated through the operations plan of the Central Dispatch Division of the El Dorado County Communications Department primarily through an "Enhanced 911" system. All 911 calls in the unincorporated portions of the County and the City of Placerville are initially answered by Central Dispatch operators. (The one exception are calls for police, fire and ambulance services within the City of South Lake Tahoe. These are answered and subsequently dispatched by 911 operators at the City Police Department.) Depending on the jurisdiction and the nature of the emergency, the call is handled or forwarded to the appropriate secondary dispatch. Central Dispatch provides direct dispatch services to County Sheriff, County ambulance, County Haz-Mat, and the following fire districts: El Dorado County (combined), Georgetown Divide, and Latrobe. Tahoe West Shore fire and ambulance calls are transferred to the Placer County Sheriff's substation in Tahoe City. Emergency calls for the California Highway Patrol are transferred to CHP dispatch, but operators stand-by in case of a fire or medical need at the accident scene. Wildland fires outside of structural fire districts are transferred to the California Department of Forestry and Fire Protection (CDF&FP) in Camino where dispatch for the U.S. Forest Service and the remaining structural fire districts (Rescue, Mosquito, Pioneer, and Garden Valley) also occurs. Central Dispatch is also connected to the State Office of Emergency Services dispatch and National Alert Warning System operated by the Federal Emergency Management Agency. These systems are activated for regional, State, and national emergencies.

Large Scale Emergencies and Disaster Response

When local resources are not sufficient for response to an emergency and mutual aid is requested, the provisions of the El Dorado County Operational Area Multi-Hazard Functional Emergency Operations Plan (MHFP) are initiated. These plans are mandated by the State to provide a consistent and coordinated method of response to large scale emergencies pursuant to the California Emergency Services Act. Objectives of the plan are to protect life and property, provide for necessary evacuation of residents, and establishing evacuation routes during an emergency and to repair and restore essential systems and services following the emergency through the coordinated effort of all responsible jurisdictions functioning as one unit. This is accomplished by outlining the administrative relationship of involved agencies and by formalizing coordination of those agencies responsible in emergency response and the provision of information to the public and the media.

The MHFP is maintained by the County Office of Emergency Services. The MHFP is incorporated herein by this reference to partially fulfill the requirements of Section 65302(g) of the Government Code.

SEISMIC HAZARDS

In 1984, the Legislature adopted Assembly Bill (AB) 2038 requiring the inclusion of seismic safety as one of the mandatory General Plan Safety Element issues. The provisions set forth in this section satisfy the seismic safety components of the Safety Element as required by Government Code Section 65302(g). The following section addresses the potential risks from seismic activity in El Dorado County and is intended to partially fulfill the State guidelines for the range of topics to be covered in the Safety Element of the General Plan. This section is closely related to the Land Use, Natural Resource Conservation and Open Space, Public Services and Utilities, and Housing Elements.

Geologic and seismic hazards include earthquake-induced ground rupture, ground-shaking, ground failure, liquefaction, lateral spreading, seiches, landslides, avalanches, water movement, and structural hazards.

Approximately 80 percent of the world's earthquake activity occurs within the Circum-Pacific Seismic Belt (Pacific Rim), an area surrounding the Pacific Ocean. Most of the active faults in the State of California are in this region of volcanic and seismic activity.

Faults

Earthquakes occur along fault zones, earth fractures, or faults. These faults and fault-related geologic features are classified as active, potentially active, or inactive. An active fault is an area where movement has historically taken place over the last 11,000 years (the Holocene Epoch) and where movement can be expected to take place within the next 100 years.

These faults, which are judged to be capable of ground rupture or shaking, pose an unacceptable risk for a proposed structure. Potentially active faults are those faults considered to have been active during Quaternary time (about the last 2 million years).

Fault Evaluation Program. The Fault Evaluation Program of the California Department of Conservation, Division of Mines and Geology (DMG), is a long-term program designed to identify active faults that may be hazardous in terms of surface fault rupture to structures built astride such faults. The program was designed to carry out objectives of the Alquist-Priolo Special Studies Zones Act of 1972 (PRC, Div. 2, Ch. 7.5, Section 2621 et. seq.). The objectives of the program are to: 1) evaluate the numerous potentially active faults not previously zoned in California; and 2) re-evaluate many of the faults already zoned with respect to the hazard of surface faulting. It should be noted that, because of the large number of potentially active faults that exist Statewide, a decision was made to zone only those faults considered to have a relatively high potential for future activity and to have reasonably well defined surface traces. Therefore, this study is not absolute proof that active or potentially active faults do not exist in this County but only that none were identified that fit the criteria for creation of a special studies zone.

West Slope Findings. No active or potentially active faults were mapped in El Dorado County. However, branches of the Bear Mountain Fault Zone and the Melones Fault Zone were mapped and described as "Well defined geomorphic evidence of Holocene faulting is lacking, although general features such as broad linear valleys and escarpments are permissive of Quaternary faulting. Trench data reveal minor offsets of late Pleistocene and possibly Holocene soils locally, but dip-slip rates for individual faults are very low (.005 to .05 mm/year)" and "Zoning not recommended" (DMG, OFR 84-52 Summary Report, 1984).

These fault zones are a part of the Foothill Fault Suture Zone (system), extending from Mariposa northward to Chico. The Foothill Fault system was considered to be inactive until a Richter Scale magnitude 5.7 earthquake occurred near Oroville on August 1, 1975 (DMG, OFR 90-10 Fault Evaluation Reports for Northern California, 1990). This seismic event raised doubts about the safety of the thin arch concrete construction planned for the Auburn (high) dam. Figure 6-1 shows the location of the identified faults. New information contained in Open File Report 92-01 (DMG OFR 92-01, Peak Acceleration from Credible Earthquakes in California), suggests the Foothill Fault Zone may be subject to seismic activity of magnitude 6.5. This report contains a list of disclaimers that includes the following: "General use of this product for seismic hazard evaluation is not recommended because this map does not take into account the probability that a particular level of shaking will occur." The disclaimer also suggests the levels of ground motion varies by order of magnitude and that variability of activity across the State was not fully addressed in preparation of the map and shaking levels are subject to change after further analysis.

Figure: 6-1 Location of Faults



0 1 2 3 4 5 10
1 INCH - APPROX 5 MILES

The report describes the Foothills and Melones Fault Zones as follows: "These two zones of predominantly minor, normal displacement faults, superimposed on major high-angle reverse faults, along the western flank and northern margin of the Sierra Nevada, would affect the east side of the Sacramento Valley, the northern part of the San Joaquin Valley, and the Sierra Nevada foothills areas. Many areas of late Cenozoic faulting and some areas of late Quaternary faulting were identified along both fault zones as a result of studies conducted after the 1975 Oroville earthquake along the Cleveland Hill fault and for foundation investigations related to the proposed Auburn Dam. Portions of these zones have been seismically active in historic time. For the purposes of this project we are considering the entire mapped length of the western-most and eastern-most fault strands of these zones, modified from Jennings (1975), as potential seismic source zones for the following reasons: 1) continuation of crustal extension affects the Sierra Nevada uplift (Hart and others, 1984, pp. 3-4); and 2) studies are lacking along both zones to identify and limit more accurately the extent of late Quaternary faulting. The maximum earthquake magnitude for the Melones and Foothills fault zones for this study is based on recommendations for the Auburn Dam Project (California Division of Mines and Geology, 1979). It appears there is not full agreement on the findings of these reports.

Tahoe Basin Findings. The Fault Evaluation Program study (DMG, OFR 90-10) did not identify any active or potentially active faults in the California portion of the Tahoe Basin. However, a Special Study Zone associated with the Genoa Fault was identified in nearby Alpine County (DMG, Special Publication 42, 1992). This fault traces northward into Nevada towards Carson City and Reno. Figure 6-1 shows that the fault is within a few miles of the County line. This fault zone is shown on the OFR 92-01 map as having a magnitude 6.5 motion potential with contours of peak acceleration of 6.4 to 6.2 extending into the Tahoe Basin. OFR 92-01 also shows the "Tahoe Fault" with an Maximum Credible Earthquake (MCE) of 6.5. This fault (system) is also called the "West Tahoe Fault" and "North Tahoe Fault" on the 1992 Preliminary Fault Activity Map of California (DMG OFR 92-03). The Natural Hazards of the Lake Tahoe Basin (CTRPA, Hazards of Lake Tahoe Basin, 1974) concluded that the Basin is located in a region of active and potentially active faults.

Earthquakes

Measurement. Earthquakes are measured on two separate scales. The first of these, energy release or "magnitude" is based on instrument records and is measured on the Richter Magnitude Scale. This scale starts with 1.0 and has no maximum limit. The scale is logarithmic, and therefore, an earthquake with a magnitude of 2.0 is 10 times the magnitude (30 times the energy) as an earthquake with a magnitude of 1.0. The largest recorded earthquakes in the world have not exceeded 8.9 on this scale (USGS, 1989).

The Modified Mercalli Scale is a second way of measuring earthquakes. This scale is divided into 12 levels of intensity and are generally subjective based on personal observations of people who felt the earthquake. A "I" on the scale is barely perceptible; a "XII" suggests catastrophic damage (USGS, 1989).

Severity of Earthquakes. The California Division of Mines and Geology's Urban Geology Master Plan for California (Bulletin No. 198, 1973) rates the potential for damage based on the probable maximum intensity of earthquakes in different portions of the State, by use of three severity zones. Zone I is low severity, with risk of probable damage ranging from minor to moderate, from earthquakes of maximum intensity equivalent to VI or VII on the Modified Mercalli Scale. Zones II and III represent increasing severity and probable damage from higher intensity earthquakes. All three zones are represented in El Dorado County. Approximately the western half of the County was designated Zone I in 1973. However, the Melones Fault Zone is now known to traverse the Placerville area; and the Bear Mountain Fault Zone has been mapped further west of Placerville, extending south of Cool/Pilot Hill (City of Placerville General Plan, 1988). The central portion of the County is classified as Zone II, and the Lake Tahoe Basin is designated Zone III (California Division of Mines and Geology, 1973). It should be noted these maps have not been updated since 1973 and may not be accurate in light of more recent findings. Therefore, the County should update this information as it becomes available.

The Uniform Building Code places the entire County into a category corresponding to the Moderate Severity and above zone. This may be more accurate in light of additional studies since 1973.

Except for highways and bridges, nearly all the residential construction has taken place in the western half of the County or the Tahoe Basin. However, several dams have been constructed within the Moderate Severity Zone to impound water for residential, recreational, or power generating purposes.

The severity and type of ground shaking and the impact of ground shaking on structures depend on several factors, including:

- magnitude of the earthquake;
- depth of focus;
- distance from causative fault;
- duration of shaking;
- local soil and groundwater conditions;
- relationship between the fundamental period of a structure and the predominant period of ground vibration;
- design of the building or structure; and
- quality of materials and workmanship used during construction.

Bedrock Acceleration. Maximum credible rock accelerations have been prepared for faults in the Foothill Fault Zone (DMG, OFR 92-01 Maximum Credible Rock Acceleration From Earthquakes in California, 1992). The Tahoe Basin and crest of the Sierra are subject to bedrock acceleration due to the proximity of three faults capable of 6.5 and 7.0 magnitude quakes.

Seismic Hazards

Fault Displacement. Fault displacement occurs either suddenly during an earthquake or slowly as creep along active faults. Recent studies indicate fault displacement exists but is not a major concern in the County (DMG, OFR 84-52 Summary Report, 1984, OFR 90-10 Fault Evaluation Reports, 1990).

Liquefaction. Liquefaction is a type of ground failure most likely to occur in water-saturated silts, sands, and gravels having low to medium density. When a soil of this type is subjected to vibration, it tends to compact and decrease in volume. If the groundwater is unable to drain during the vibration, the tendency of the soil to decrease in volume results in an increase in pore-water pressure. When the pore-water pressure builds up to the point where it is equal to the over-burden pressure (effective weight of overlying soil), the effective stress becomes zero. In this condition, the soil loses its sheer strength and assumes the properties of a heavy liquid (El Dorado County, Seismic Safety Element, 1982).

Liquefaction during major earthquakes has caused severe damage to structures on level ground as a result of settling, tilting, or floating. This type of damage occurred in San Francisco on bay-filled areas during the 1989 Loma Prieta earthquake even though the epicenter was over 40 miles away. If liquefaction occurs in or under a sloping soil mass, the entire mass may flow toward a lower elevation. This type of slide occurred along the coastline near the town of Seward during the 1964 Alaska earthquake. The bedded lake sediments around Lake Tahoe and wet meadows on the Western Slope are areas where liquefaction could occur in El Dorado County. However, there are no specific assessments of these hazards.

Lateral Spreading. Lateral spreading induced by earthquake shaking may occur as a result of soils moving toward an unsupported surface or slope even though the slope may not be steep. Lateral displacement has occurred in soft saturated clays such as bay and lagoon deposits. During ground shaking, these soft materials may flow, form wave-shaped masses, or squeeze laterally. This type of ground failure can also occur beneath fills with the fill moving and developing severe longitudinal cracks. Lateral spreading is not an identified problem in El Dorado County.

Seiches. An earthquake could produce a seiche (water wave within a closed or restricted body of water) in any of the County's lakes or reservoirs. A small (0.4 foot) wave surge was reported on Lake Tahoe during the 1966 Truckee earthquake which had a Richter Scale magnitude of between 6.0 and 6.9 (El Dorado County, Seismic Safety Element, 1982).

Landslides and Avalanches. Landslides and avalanches can be triggered by earthquakes. This would be most likely to occur in the steeper areas of the County with the highest expectable earthquake intensity, namely the higher elevations of the Sierras, both on the Western Slope and in the Tahoe Basin. The likelihood of these events are increased during times of high precipitation. See also the later discussions regarding slope instability and avalanche hazards.

Structural Hazards

Because of concerns for public health and safety, the State of California enacted the Riley Act and the Field Act which together impose safety requirements on buildings built after 1933 as an attempt to ensure soundness and safety in earthquake events. Older buildings must sometimes undergo retrofitting to meet standards set for expected earthquake impacts. Special attention is given within the State laws regarding buildings devoted to public use.

A list of public buildings and schools owned by or under the administration of El Dorado County that were constructed wholly or in part prior to May 26, 1933, is presented below:

County Courthouse - Placerville	1911
(Structurally rebuilt in early 1970s)	
Chamber of Commerce - Placerville	1923
Independence High School - Diamond Springs	N/A
(No longer used for classrooms)	
Georgetown Justice Court - Georgetown	1867
Georgetown Library - Georgetown	Late 1800s
Latrobe School - Latrobe	N/A
(No longer used for classrooms)	
Bayley House - Pilot Hill	1852

The County has made no specific evaluation of the overall condition of these buildings. The County has not adopted the Uniform Code for the Abatement of Dangerous Buildings and presently has no jurisdiction over privately owned structures until a permit is requested from the County. Currently, all major structural plans are reviewed for seismic loading by the County Building Department.

Per section 2690 et. seq. of the Public Resources Code, a fee of \$.07 per \$1,000 valuation is collected on every building permit. This money is forwarded to the State for use in maintaining a seismic instrumentation and hazard mapping program. To date these efforts are concentrated in high priority areas such as the San Francisco Bay and southern California metropolitan areas. Ultimately, these programs will benefit El Dorado County through updates of local hazard maps.

Dam Failures. Seismically induced dam failure is a remote possibility in El Dorado County. The State Department of Water Resources, Division of Safety of Dams (DSD), is responsible for the evaluation of seismic safety of dams within their jurisdiction. Only one reservoir, Fannon Reservoir, owned by the California Department of Fish and Game, has been identified by the DSD as being at risk during an earthquake due to the type of construction (Hydraulic Fill). The dam has been slated for remedial action that may include removal. The Department of Fish and Game is currently assessing remedial action to resolve the situation.

Dam safety, a list of jurisdictional dams, and reference to inundation reports on dams in the County are discussed later in this chapter.

GEOLOGIC HAZARDS

The extensive amount of steep slopes and the soil types that predominate in the County present potential geologic hazards to development. The conditions which typically require additional engineering or avoidance include: slope instability, erosion, expansive soils, subsidence, and volcanic hazards. A discussion of snow avalanche hazard is included in this section because base geologic conditions (i.e., steep slopes) are a driving factor of this hazard. This discussion of geologic concerns is intended to identify possible constraints to land development and to fulfill Government Code Section 65302(g) regarding the range of issues to be addressed in the Safety Element of the General Plan.

Slope Instability

The Generalized Map Showing Relative Amounts of Landslides in California places El Dorado County entirely within the Low Severity Zone (DMG, Bulletin 198, Urban Geology Master Plan for California, 1973). This study indicates that higher relative amounts of landslides can be expected in the western third of the County along the Foothills and Melones Fault Zones, because of the planes of weakness associated with faulting in the area, and also on the Eastern Slope of the Sierras west of Emerald Bay.

Cuts and fills associated with road building activity are a major cause of slope instability. As the County road system is upgraded (widened and straightened), the additional cuts and fills may lead to greater instability than is presently experienced. Rock Creek Road has experienced a series of closures due to instability and poor location according to Department of Transportation Maintenance staff (Kennedy, 1993). U.S. Highway 50 in the American River Canyon has been impacted several times in the last decade by landslides. Caltrans is involved in a number of stabilization projects associated with ongoing roadway improvement and maintenance projects in the canyon (Cena, 1993). State Route 89 in the Emerald Bay area experienced a major rockslide/landslide in the early 1950s and again during the winter of 1955-56 during which material blocked the roadway and slid into the bay. This has resulted in an ongoing stability and maintenance problem that will be difficult, if not impossible, to cure.

A landslide into a lake or bay has the potential to produce a wave that could imperil waterfront development. A massive landslide into a smaller lake, such as Fallen Leaf Lake, or into a bay of a larger lake, such as Emerald Bay, could produce a wave equal to the volume of the slide material. Such an event at Fallen Leaf Lake could pose a hazard to the commercial and residential development that occurs along the lakeshore. Emerald Bay is a State Park where residential development is precluded, but recreational facilities may be at risk. However, the threat to humans is minimized because the park is closed during winter period when such an event is most likely to occur. No precise evaluation of these hazards has been conducted nor is it anticipated (Sugarmann 1993).

Erosion and Sedimentation

Erosion poses two safety hazards: 1) it removes soil, thereby undermining roads and buildings and producing unstable slopes, and 2) it deposits eroded soil in reservoirs, lakes, drainage structures, and on roads as mudslides. Natural erosion is frequently accelerated by human activities such as clearing and grading.

Erosion potential in El Dorado County is rated by the Soil Conservation Service (SCS) of the U.S. Department of Agriculture as low or moderate on most of the land with slopes less than 15 percent. However, the Soil Surveys for the El Dorado Area (1974) and the Lake Tahoe Area (1974) both identify many soil series with a high erosion potential, particularly those with slopes over 15 percent. The SCS regularly flags these soil types and suggests mitigation measures when commenting on developmental applications. Additionally, the County Grading Ordinance contains provisions to protect soil resources.

Expansive Soils

Expansive soils are those that greatly increase in volume when they absorb water and shrink when they dry out. The central half of the County has a moderate expansiveness rating while the eastern and western portions are rated low (DMG, Bulletin 198, Urban Geology Master Plan for California, 1973). These boundaries are very similar to those indicating erosion potential. When buildings are placed on expansive soils, foundations may rise each wet season and fall each dry season. This movement may result in cracking foundations, distortion of structures, and warping of doors and windows. Again the SCS identifies soil series that may be subject to expansion during the project review process.

Subsidence

Surface subsidence is caused by groundwater withdrawal, gas withdrawal, hydrocompaction, or peat oxidation. None of these types of subsidence is evident in El Dorado County.

Volcanic Hazards

The potential for volcanic hazard exists in the Tahoe-Truckee area as evidenced by the relatively young volcanic rocks in the northern portion of the area and the presence of a geothermal spring near Brockway (DMG, Bulletin 198, Urban Geology Master Plan for California, 1973). The possibility of a volcano erupting in the area is remote, however, and in any case, no preventive action can be taken to avert it nor are reliable means available to predict where it might occur. Volcanic eruptions are generally preceded by numerous earthquakes which usually provide adequate warning to those who may be in the affected area to evacuate (CTRPA, Hazards of Lake Tahoe Basin, 1974).

Avalanche Hazards

Snow avalanches can be expected to occur in steeper areas with significant snowfall. These areas are primarily on both sides of the Sierras above 5,000 feet, but best conditions exist on north and east facing (leeward) slopes of the Sierra crest during and after heavy snowfall events (Wilson 1975, Avalanche Hazard Zones, Echo Lake, California, 1980).

U.S. Highway 50 and State Route 89 are temporarily closed several times each winter because of sliding snow and accompanying rock. These closures take place in the Echo Summit and Emerald Bay areas, respectively. Caltrans practices active avalanche control at the Echo Summit location. The Emerald Bay section is often closed for days, if not weeks, at a time. There are no records of avalanches below U.S. Highway 50 that would pose a hazard to residential development. This may be due to the location of start-zones above the highway that are managed by Caltrans because slope conditions and a lack of vegetation below the roadway imply past activity. However, there is no historical occurrences of avalanches below U.S. Highway 50 (Shirley Taylor, Personal Communication, May 1993).

The U.S. Forest Service has identified avalanche hazard zones in the Echo Lake and Fallen Leaf Lake areas that may pose a hazard to private vacation cabins in both areas and perhaps the Stanford Sierra Camp (Wilson, 1975, Avalanche Hazard Zones, Echo Lake, California, 1980).

Development Procedures

Volume I of the El Dorado County Design and Improvement Standards Manual requires a Land Capability Report for Tentative Maps that "shall define the suitability of the tract with regards to waste discharge, building foundation, grading and drainage, traffic circulation, and passive solar opportunities". Section 4: SOILS AND GEOLOGY, requires, among other items, an analysis of:

- groundwater effects on slope stability
- seismic risks and appropriate references
- non-seismic mass movement
- expansive soils
- erosive soils

This information is to be submitted as a component of the application materials.

FLOOD HAZARDS

Flood hazards can result from intense rain, snowmelt, cloudbursts, a combination of the three, or failure of a water impoundment structure. Floods from rainstorms generally occur between November and April and are characterized by high peak flows of moderate duration. Snowmelt floods, normally expected between April and June, have larger volumes and last longer than rain flooding.

A flood has many implications for public safety. Hazards caused by flooding include loss of life, displacement or complete destruction of buildings, siltation, temporary loss of utilities, road and bridge damage resulting in transportation slowdowns, loss of goods and services, and the threat of waterborne diseases. Additionally, significant private and public costs are associated with flooding, particularly in urban areas.

Despite the potential hazards, development in flood-prone areas remains desirable for a variety of land uses not requiring structures. In addition to agricultural uses, flood-prone areas frequently offer good recreational opportunities and often provide habitat for many forms of wildlife including rare or endangered animal and plant species.

This discussion of flood hazards is intended to describe potential constraints to land development and to partially fulfill the State requirements in Section 65302(g) of the Government Code for topics to be addressed in the Safety Element.

Flood Hazard Management Areas

100-Year Floodplain. The boundary of the 100-year floodplain is the basic planning criterion used to demarcate unacceptable public safety hazards. The 100-year floodplain boundary defines the geographic area having a one percent chance of being in a flood in any given year. All streams are subject to a 100-year flow and therefore have a 100-year floodplain. However, not all are mapped. Figure 6-2 shows the 100-year floodplain areas in El Dorado County that have been identified by the Federal Emergency Management Agency (FEMA) where a reasonable risk was presumed to occur. Outside this boundary, the degree of flooding risk is not considered sufficient, or the improvements or the chance of improvements are not present to justify the imposition of floodplain management regulations, while inside the 100-year floodplain some level of regulation is desired to protect public health, safety, and welfare.

The 100-year flood plain is divided into a floodway and floodway fringe. The floodway is the channel of a stream, plus any adjacent floodplain areas, that must be kept free of development so that the 100-year flood can be passed through without substantial increases in flood heights. Development within the floodway reduces the flood water carrying capacity of the channel, increases flood heights, and thereby increases flood hazards beyond the border of the floodway. As a minimum standard, FEMA limits increases in flood heights within the floodway to 1.0 foot provided that hazardous water velocities do not occur.

The area between the floodway and the boundary of the 100-year floodplain is termed the floodway fringe and encompasses the portion of the floodplain that could be used for development without increasing the surface elevation of the 100-year flood more than 1.0 foot at any point.

Different development standards may be formulated for the floodway and the floodway fringe. These standards have two functions. First, they are designed to minimize loss of life and property damage by controlling the types of land uses permitted and by prescribing certain construction methods. Second, they are intended to preserve the ability of the floodway to

discharge the 100-year flood. Failure of floodplain regulations to recognize this latter function by prohibiting encroachment of the floodway will result in an increase in the geographic area of the 100-year floodplain.

El Dorado County has enacted a flood plain ordinance compatible with FEMA guidelines to regulate development within the 100-year floodplain. While not necessarily desirable, development may occur, however, certain engineering and zoning standards apply.

Location of Flood Hazard Areas. Due to a lack of extensive low lying areas and a great deal of upland areas, the majority of El Dorado County is not subject to flooding. Localized flooding is always a possibility that can be exacerbated by development.

The Federal Emergency Management Agency (FEMA) flood plain maps and the El Dorado County resources map (on file at the County of El Dorado) identify the following major drainage areas as flood prone areas:

- | | |
|-----------------------|---|
| Northeast County: | <ul style="list-style-type: none">• Coloma Canyon Creek between Greenwood and Garden Valley; and• Finnon Reservoir. |
| Central County: | <ul style="list-style-type: none">• Weber Creek from the American River to Placerville, including Cold Springs, Dry and Spring Creek tributaries. |
| South County: | <ul style="list-style-type: none">• Deer Creek from Shingle Springs to the County line, including the Cameron Park area; and• Big Canyon Creek from El Dorado to the Cosumnes River, including the Slate, Little Indian, and French Creek tributaries. |
| South-Central County: | <ul style="list-style-type: none">• The Middle Fork of the Cosumnes River within the Somerset-Fairplay vicinity;• Cedar Creek from Omo Ranch to the Cosumnes; and• Jenkinson Lake. |
| Tahoe Basin | <ul style="list-style-type: none">• Upper Truckee River• Trout Creek• Cold Creek• Angora Creek• Saxon Creek |

These flood prone areas are shown on Figure 6-2, Flood Hazards.

Cameron Park Watershed Study. The Soil Conservation Service conducted an extensive watershed study of the upper Deer Creek drainage that identifies flood zones and suggested several remedial actions (SCS, 1985). This study is used to evaluate new projects and to identify drainage facility improvements. The Department of Transportation is revising the study to reflect new development and changing watershed conditions.

Dam Failure

A dam failure can occur as the result of an earthquake, as an isolated incident because of structural instability, or during heavy runoff that exceeds spillway design capacity. According to the Department of Water Resources, El Dorado County does not have a history of major dam failure (Peterson, 1990). Table 6-1 lists the characteristics of dams in El Dorado County nine of which have been identified as having the potential of inundating habitable portions of El Dorado County in the event of dam failure. These nine dams are Echo Lake Dam (PG&E), Union Valley Dam (SMUD), Ice House Dam (SMUD), Chili Bar Reservoir (PG&E), Stumpy Meadows Dam (GDPUD), Weber Creek Dam (EID), Slab Creek Dam (SMUD), Loon Lake Auxiliary Dam (SMUD), and Blakeley Dam (EID). Two other dams not listed in Table 6-1 have inundation potential: Caples Lake Dam (PG&E), and Cameron Lake/Warren Hollister Dam (EID) (OES, 1975). The inundation maps for these 11 dams show all areas potentially affected by each dam in the event of failure. These maps can be found at the County Office of Emergency Services.

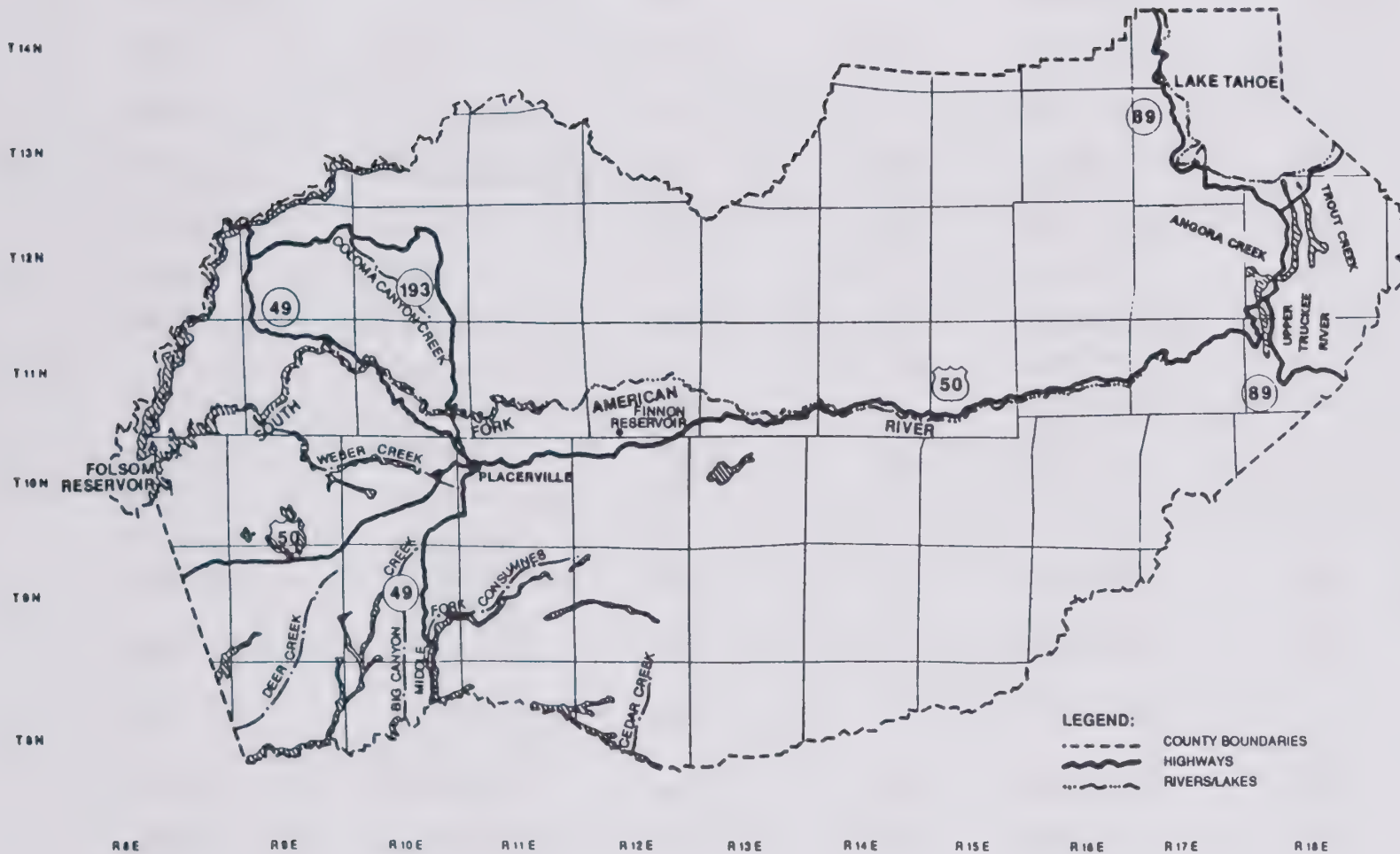
The amended Dam Safety Act requires that dam owners submit inundation maps to the California Office of Emergency Services for dams where total failure would cause loss of life or personal injury. This act also requires local jurisdictions to adopt emergency procedures for the evacuation and control of populated areas below such dams. The County's Multi-Hazard Functional Plan contains dam failure plans for those dams that qualify for mapping. The individual dam facility plans located at the County Department of Emergency Services include a description of the dams, direction of flood waters, responsibilities and actions of individual jurisdictions, and evacuation plans.

As previously mentioned, Finnon Dam has been identified as potentially susceptible to damage from a seismic event by the Division of Safety of Dams due to its hydraulic fill construction method. Following the San Fernando Earthquake of 1971, all dams of this construction were identified for review, inspection, and remediation, if necessary.

EL DORADO COUNTY

GENERAL PLAN

**Figure: 6-2
Flood Hazards**



100 Year Floodplain
Zone A

Source: Federal Emergency Agency
Flood Insurance Rate Maps
Effective Date: October 18 1983



0 1 2 3 4 5 10
1 INCH = APPROX 5 MILES

Table 6-1: Dams in El Dorado County within the Jurisdiction of the State of California

<u>Name</u>	<u>Owner</u>	<u>Type</u>	<u>Storage Capacity</u>	<u>Stream</u>	<u>Drainage Area (sq. mi.)</u>	<u>Year Completed</u>	<u>Location (section, T, R)</u>
Abrams	George T. Straza	earth	110	Hastings Creek	6.4	1950	33 12N 9E
Aeree	Pilot Hill Estates Homeowners Assoc.	earth	90	Tr. Pilot Creek	0.52	1951	31 12N 9E
Alder		rock					
Auburn Lake Trails	Auburn Lake Trails Property Owners	earth	68	Main Bar Canyon	0.16	1978	2 12N 9E
Aukum View	Showcase Community Services District	earth	136	Tr. Flat Creek	0.27	1962	1 8N 11E
Bacchi	Bacchi Valley Industries	earth	25	Brush Creek	0.67	1946	12 11N 9E
Barnett	Douglas Milton	earth	115	Barnett Creek	0.63	1948	12 9N 9E
Big Canyon Creek	N. Bruce & Barbara E. Ashwill	earth	395	Big Canyon Creek	5.4	1935	20 9N 10E
Blakeley*	EID	earth	152	Tr. SF American River	0.128	1875	12 10N 11E
Brush Creek	SMUD	vara	1,750	Brush Creek	8	1970	10 11N 12E
Buck Island	SMUD	grav	1,070	Little Rubicon River	5.35	1963	6 13N 16E
Cameron Park	Cameron Park Community Services District	earth	480	Deer Creek	2	1951	33 10N 9E
Camino	SMUD	vara	845	Silver Creek	165	1961	4 11N 13E
Chili Bar*	PG&E	grav	3,700	SF American River	590	1964	25 11N 10E
Cross Creek Ranch	Cross Creek Ranch	earth	55	Tr. Weber Creek	0.06	1949	32 11N 10E
Crystal Lake	George T. or Betty J. Carasco	earth	225	Tr. Deer Creek	0.28	1952	5 9N 9E

Table 6-1: Dams in El Dorado County within the Jurisdiction of the State of California (cont.)

<u>Name</u>	<u>Owner</u>	<u>Type</u>	<u>Storage Capacity</u>	<u>Stream</u>	<u>Drainage Area (sq. mi.)</u>	<u>Year Completed</u>	<u>Location (section, T, R)</u>
D'Agostini	Adele D'Agostini	earth	355	Spanish Creek	5.2	1950	35 9N 11E
Echo Lake*	PG&E	earth & rock	1,900	Tr. Upper Truckee River	4.9	1876	1 11N 17E
El Dorado Forebay	PG&E	earth	472	Long Canyon	0.25	1923	25 11N 12E
El Dorado Hills	EID	earth	200	Carson Creek	0.27	1980	13 9N 8E
Emerg. Effl. Holding	STPUD	earth	184	Offstream	0	1961	2 12N 18E
Fallen Leaf*	Forest Service	grav	6,800	Taylor Creek	16	1934	1 12N 17E
Fay Gunby	Eugene & Marie Arambel	earth	117	Tr. Weber Creek	0.7	1961	11 10N 11E
Finnon Lake	State Dept. Fish and Game	hydraulic fill	400	Jay Bird Creek	0.27	1905	16 11N 11E
Gastaldi	Leon Gastaldi	earth	83	Tr. Weber Creek	0.11	1951	33 11N 10E
Georgetown Control	Georgetown Divide PUD (GDPUD)	earth	50	Canyon Creek	0.02	1956	5 12N 11E
Gerle	SMUD	grav	1,200	Gerle Creek	30.9	1962	15 13N 14E
Holiday Lake	Holiday Lake Community Services District	earth	150	Sawmill Creek	0.81	1951	6 9N 10E
Ice House*	SMUD	rock	45,960	SF Silver Creek	28.4	1959	1 11N 14E
Indian Creek	Greenstone Country Owners Association	earth	457	Indian Creek	5.9	1946	18 10N 10E
Jacobs Creek	EID	earth	587	Jacobs Creek	0.49	1948	23 11N 9E
Junction	SMUD	vara	3,250	Silver Creek	142	1962	30 12N 14E
King Cherokee	Richard E. King	earth & rock	28	Cherokee Creek	0.14	1939	7 11N 9E
Loon Lake*	SMUD	rock	76,500	Gerle Creek	8.1	1963	5 13N 15E
Manhattan Creek	William Kasner	earth	110	Manhattan Creek	1.33	1952	22 12N 10E

Table 6-1: Dams in El Dorado County within the Jurisdiction of the State of California (cont.)

<u>Name</u>	<u>Owner</u>	<u>Type</u>	<u>Storage Capacity</u>	<u>Stream</u>	<u>Drainage Area (sq. mi.)</u>	<u>Year Completed</u>	<u>Location (section, T, R)</u>
Mark Edson ^o (Stumpy Meadows Reservoir)	Georgetown Divide PUD (GDPUD)	earth & rock	2,000	Pilot Creek	15.6	1962	11 12N 12E
Medley Lakes (Lake Aloha)	PG&E	grav	5,350	Tr. SF American River	3.36	1923	30 12N 17E
New Bass Lake	EID	earth	745	Carson Creek	0.03	1978	31 10N 9E
Niegel	Mrs. Charles B. Kuhn	earth	145	Hastings Creek	0.33	1951	21 12N 9E
Patterson	Larry A. Patterson	earth	350	Deadman Creek	0.52	1960	36 10N 10E
Ralston Lake*	CASDFG (operated by USFS)	grav	150	Ralston Lake	0.3	1960	34 12N 17E
Robbs Peak	SMUD	grav	30	SF Rubicon River	17	1963	27 13N 14E
Rock Creek (Chiquita Lake)	Barbara Kessler	earth	34	Rock Creek	0.54	1932	34 13N 11E
Round Lake*	CASDFG (operated by USFS)	grav	300	Upper Truckee River	1.5	1955	4 10N 18E
Rubicon	SMUD	grav	1,450	Rubicon River	26.44	1963	9 13N 16E
Schmidell Lake	State Dept. Fish and Game	grav	184	Tr. Rubicon River	0.73	1955	33 13N 16E
Schubin	Nick J. Schubin	earth	225	Tr. Weber Creek	0.46	1952	36 11N 9E
Schaffer	Glen Schaffer	earth	111	Indian Creek	1.7	1968	20 10N 10E
Slab Creek ^o	SMUD	vara	16,600	SF American River	497	1967	25 11N 11E
Sly Park* (Jenkinson Lake)	Bureau of Reclamation	earth	41,000	Sly Park Creek	47	1955	17 10N 13E
Stoney Ridge Lake*	CASDFG (operated by USFS)	grav	315	Meeks Creek	3.5	1955	7 13N 17E
Straza	George T. Straza	earth	185	Black Rock Creek	7.63	1971	4 11N 9E

Table 6-1: Dams in El Dorado County within the Jurisdiction of the State of California (cont.)

<u>Name</u>	<u>Owner</u>	<u>Type</u>	<u>Storage Capacity</u>	<u>Stream</u>	<u>Drainage Area (sq. mi.)</u>	<u>Year Completed</u>	<u>Location (section, T, R)</u>
Union Valley *	SMUD	earth	271,000	Silver Creek	84	1963	19 12N 14E
Volo Mining Co.	Evelyn Smith Purser, et al.	earth	148	Indian Creek	1.87	1958	21 10N 10E
Weber*	EID	multiple arch	1,100	NF Weber Creek	9.4	1925	18 10N 12E
Williamson No. 1	Michael Hy Chau	earth	150	Tr. Weber Creek	1.22	1926	35 11N 9E

Legend:

vara	variable radius arch
grav	gravity
Tr.	Tributary
SF	South Fork
NF	North Fork
EID	El Dorado Irrigation District
SMUD	Sacramento Municipal Utility District
PUD	Public Utility District
USFS	United States Forest Service
PG&E	Pacific Gas & Electric
STPUD	South Tahoe Public Utility District
CASDFG	California State Department of Fish and Game

* Dams within California owned and operated by agencies of the federal government

* Dams with inundation potential; inundation maps available

Source: Department of Water Resources, Dams within Jurisdiction of the State of California, 1988

Floodplain Management

No area can be completely protected from flooding. However, there are a variety of methods that can increase the level of protection, reduce the frequency of flooding, and reduce the damage when flooding does occur. El Dorado County must rely on land use controls to reduce flood damage due to a lack of structures dedicated to flood control and a lack of land use control in upper watershed source areas.

Flood Control Structures. Historically, the emphasis for flood management in California has been to control the flow of water. These types of flood control projects include the construction of reservoirs in upstream areas to retain and gradually release water, the construction of levees to confine water to the channel or designated area, the improvement of channels to increase their water carrying capacity, and the establishment of bypasses or diversions.

There are no dams dedicated to flood control on the West Slope nor in the Tahoe Basin. All existing reservoirs in El Dorado County are operated for power generation, not flood control purposes. There are no known levees in El Dorado County (Department of Water Resources, 1990).

Land Use Regulations. Even with the existence of flood control structures, flooding still occurs. Therefore, regulation of land uses within areas subject to flooding is necessary to reduce injury and loss of life, to reduce structural damage caused by flooding, and to reduce public expenditures for additional flood control structures. Land use regulations can be employed to limit the uses allowed in an area and to apply special building requirements to reduce the damage from flooding for those structures that are allowed.

National Flood Insurance Program. El Dorado County participates in the National Flood Insurance Program (NFIP), a Federal program administered by FEMA. The primary benefit of participating in this program is that it provides an opportunity for property owners to purchase flood insurance, which is unavailable from any private insurer, if their community has made a commitment to implement floodplain management regulations specified by FEMA. Failure to implement these regulations could result in County suspension from the program. The County is occasionally audited by the Department of Water Resources to ensure compliance and implementation.

Under the NFIP, the County is required to regulate for 100-year flood protection. A 100-year flood is considered a severe flood but one with reasonable possibility of occurrence for purposes of land use planning, property protection, and human safety. The Corps of Engineers, under contract to FEMA, prepared a flood insurance study report and a series of maps (Flood Insurance Rate Maps (FIRM)) that depict the location of calculated 100-year flood, flood elevations, floodways, 500-year flood boundaries, and flood insurance rate zones.

Flood Zone Ordinance Requirements. El Dorado County regulates development within the 100-year floodplain through the use of its Zoning Ordinance. A development permit is required before construction or development begins within any area of special (identified) flood hazard (Zone A and AL-30). Within designated floodways, no new structures are permitted except such things as bridges, railroads, pipelines, accessory structures, launching ramps, and structures associated with marinas (if no alternative location outside the floodway is available). Structures within floodways are limited so that obstructions are not created, the possibility of floating materials is reduced, and the flood height will not be increased more than one foot. New construction and substantial improvements to existing structures are required to have the lowest floor elevated above the 100-year flood elevation. New non-residential buildings must either meet these requirements or provide an alternative method of flood-proofing that is certified by a registered architect or engineer and approved by the County Building Inspector. In all areas of special flood hazards, standards of construction are required including anchoring of all new construction and substantial improvements, the use of materials and equipment resistant to flood damage, and the use of methods and practices that minimize flood damage (e.g., watertight doors, reinforcement of walls, anchoring of structures and accessory items, etc.).

Public Information. An important part of flood management is the provision of flood information to the public. If the stream of interest has been mapped by FEMA, information regarding the flooding potential of a property, the depth of flooding, and the flood insurance rate zones from the National Flood Insurance Program are available. The Planning Department can provide information regarding whether a particular property is within a flood zone. Also, if adequate information is not available, additional information may be available from FEMA/Corps of Engineers. Additionally, the County can request stream studies for longer term use.

Emergency Preparedness. In the Multi-Hazard Plan currently under revision, El Dorado County has established procedures for response in the event of an emergency, including a flood. Objectives of an emergency plan are to save lives and protect property and to repair and restore essential systems and services. This is accomplished by the coordination of all agencies involved in the emergency and the provision of information.

Another aspect of emergency preparedness is the evacuation plan. Evacuation plans are required for existing mobile homes, mobile home parks, or recreational vehicle parks located within a floodway. They are also required for existing or new recreational vehicle parks located within flood fringe areas. Existing mobile home parks within flood fringe areas have the option of providing ground anchors to be used as tie downs for the mobile homes rather than evacuating. The purpose of the evacuation plans is to show how the mobile homes and recreational vehicles will be evacuated if a flood occurs.

Master Plan of Drainage

Separate from the FEMA delineation of 100-year floodplains, the El Dorado County Master Plan of Drainage is a three-year program with a goal to develop a Capital Improvement Program with a funding mechanism to construct essential drainage infrastructure and to repair and/or replace inadequate drainage facilities throughout the County. The Capital Improvement Program is intended to establish methods for prioritization of existing and future drainage deficiencies and requirements with respect to potential damage, risk, and cost.

Included in the program is the development of a County Hydrology and Hydraulics Manual which provides standard procedures for future designs. The Manual is currently complete in a draft form. Additionally, mapping on magnetic USGS 7.5 minute quads of all watersheds in the County has been acquired.

Development of the Capital Improvement Program and funding mechanism is currently under contract with consultant. This contract also includes two engineering planning and economic basin studies in the areas of Cameron Park and El Dorado Hills. These basin studies provide for area specific analysis and compile a database and identify hydraulic and hydrologic model parameters to be included in County regional objectives.

FIRE HAZARD

Fire safety for residents in the unincorporated rural areas of the County is a rapidly growing concern. Many homes have been built in the hazardous fuel areas identified by the California Department of Forestry and Fire Protection without adequate provision for protection from wildfire. The Cleveland Fire of September and October 1992 burned 24,580 acres, injured 50, killed two, destroyed 43 structures and a key water supply flume, and closed U.S. Highway 50 for a week. While not as severe a loss of homes as the 1988 Forty-Niner fire in nearby Nevada County that destroyed 157 homes, all factors are present elsewhere in the County to create a similar catastrophic loss.

Wildland fires have always been a threat to homeowners in California. The El Dorado County climate, with long, hot, dry summers, combined with poor road access, inadequate clearance, flammable vegetation, and steep topography,, produces severe wildfire conditions annually.

There are generally two types of fire hazards, wildland and non-wildland fires. Wildland fires in El Dorado County have caused major resource damage requiring large investments in burn rehabilitation. These fires burn natural vegetation on developed and undeveloped lands and include timber, brush, woodland, and grass fires. Non-wildland fires include structural, chemical, and vehicle fires. Non-wildland fires, as opposed to wildland fires, also pose the greatest threat to human life and property. As these fires occur predominantly in urban areas, future urban development in El Dorado County will increase the need for fire protection services.

As development pushes further into the urban/wildland interface, the risk of wildland fire becomes greater. Therefore, this discussion will focus on wildland fire issues. Structural firefighting is similar throughout the State in urban and suburban areas with regards to response time, initial attack, and suppression techniques. No particularly unique structural fire suppression conditions exist in El Dorado County.

This section is intended to describe fire hazards in the County and to partially fulfill the State guidelines (Government Code Section 65302(g)) for topics needing to be addressed in the Safety Element of the General Plan.

Wildland Fire Hazard Factors

The California Department of Forestry and Fire Protection (CDF&FP) has established a fire hazard severity classification system for California wildland which assesses the fire potential for wildland based on three factors: fuel load, climate, and topography. The classification system provides three classes of fire hazards: moderate, high, and extreme. Many homes in the high and extreme fire hazards areas, as identified by the CDF&FP, are without adequate protection from wildland or structural fires.

The degree of hazard in wildland areas depends on weather (temperature, moisture, wind), the amount of dryness and arrangement of vegetation, slope steepness, accessibility to human activities, accessibility of firefighting equipment, and fuel clearance around structures. The Fire Hazard Map, available for review at the County Planning Department, integrates the combinations of vegetative types, fuel loading, topography, and access for much of the Western Slope of El Dorado County.

Fuel Loading. Vegetative characteristics in El Dorado County range from light grasslands in the southern portion to heavy timber along the eastern boundary. Between these two diverse types of vegetative communities are varieties of brush and woodland. The quantity of available vegetative fuel determines the intensity of a wildland fire. Types of fuel loads are classified into three categories:

- **Light (Grass).** Includes areas dominated by grasses, annual herbs, and barren land. This is the lightest fuel load; it burns easily, but is the easiest to control.
- **Medium (Shrub).** Includes areas in which brush, shrubs, and other perennial vegetation less than six (6) feet in height are dominant.
- **Heavy (Woods - Brushwood).** Includes areas in which vegetation six (6) feet or more in height is dominant. This is the hardest vegetative type to get burning; but, due to the heavy fuel load, it is the most difficult to control once burning commences.

The California Department of Forestry and Fire Protection (CDF&FP) has a fuel reduction program called the Vegetation Management Program (VMP). Limited funding is available to conduct fuel management activities primarily by burning on parcels or aggregates of parcels of 100 acres or more. The objective of the VMP is to prevent high intensity wildfire through fuel modification. If brush can be kept in the 0-10 year age class (medium fuel), the intensity of fire can be reduced significantly.

Weather. The weather during the summer and fall months is generally hot and dry but subject to infrequent cooler weather conditions. Marine air often moves onto the County from the west, dropping temperatures, raising relative humidity, and generally reducing the fire danger for short periods without any long-term effects.

During the fall and early winter months, the County experiences foehn or "Mono" winds from the east or northeast caused by compressional heating. While these winds are blowing, any spark has major fire potential. The first winter-type storm usually occurs in October which reduces the fire danger significantly. Prescribed burning projects generally begin after this storm (U.S. Forest Service, 1988). Long, hot, and dry summers with temperatures often exceeding 100°F. add to the County's fire hazard making wildland areas more susceptible to fires from human activity and/or lightning.

Lightning fires in the County follow no perceptible or predictable pattern. While occurrence is normally at the higher elevations during the summer months, historical records indicate that mid-elevations receive an equal number of lightning fires with no discernible pattern. According to the Eldorado National Forest Land and Resource Management Plan EIS, in an average year, lightning starts 42 fires in the forest.

Topography. Topography is a central factor when considering the fire hazard of an area. As slopes increase, for example, fires spread faster. In the steep heavily vegetated ravines prevalent throughout the County, fire spreads rapidly and creates a "chimney effect" while burning. Also, steep slopes and ridgelines dictate road location thereby increasing travel time for emergency equipment and restricting firefighter access to a fire. Thus, as slope increases, the ability to control fire decreases.

Access. Access to a fire dictates suppression techniques and ultimately the success of the suppression effort. It is recognized that a lack of access, complicated by evacuating residents, was a primary factor for the destructive nature of the Forty-Niner fire in Nevada County in 1988. Similarly, the majority of structures burned in the Cleveland Fire were lost due to inadequate bridges across the American River that were unable to support the weight of fire trucks.

Steep slopes have tended to dictate the location and design of roads. Additionally, dead end roads without the benefit of loop circulation systems predominate in the County. This presents an extremely dangerous situation when coupled with the substandard width of most public and private roads. Additionally, driveway access from these roads to structures is generally substandard (narrow, steep grades, etc.).

Current development activity is subject to "Fire Safe" requirements (see next section) designed to provide a minimum 18 foot wide roadway access to all parcels. Dead end roads are discouraged, but if proposed, turnarounds and maximum length limitations apply. Driveway standards now require a minimum ten foot width with turnouts if over 150 feet in length. Finally, fuel clearance standards apply to reduce fire intensity near roads.

Human Activity. Where there is human access into wildland areas, the risk of fire increases because of a greater chance of human carelessness and historic and current management practices. Human activities such as smoking, debris burning, and equipment operation are the major causes of wildland fires. According to the California Department of Forestry and Fire Protection (CDF&FP), 95 percent of all fires in El Dorado County are started by people while five percent are started by lightning and other causes (Gilbert, 1990). Encouraging or directing substantial population growth into the severe and high fire hazard areas increases the exposure of wildland fires and compounds the firefighting effort due to access, water, and equipment constraints. In addition, development of structures redirects the firefighting efforts to protecting and saving structures at the expense of non-developed wildlands.

The annual timber harvest adds to the fuel loading problem. Provisions for slash disposal have been incorporated into timber sale contracts for the past few decades. Even with such provisions the slash often sits for a summer prior to treatment resulting in a fire hazard.

Timber management practices have resulted in dense, second growth timber mixed with brush and slash. This condition results in dangerous fire conditions. The decades old practice of fire suppression and a lack of controlled fires has further contributed to heavy accumulations of dead and downed fuels.

Other fuel modification problems exist in those areas where considerable investment has been made in plantations. Plantations of young trees provide heavy, continuous fuels. The Ice House burn of 1959 is an example where solid windrows of slash existed throughout stands of young trees creating a highly flammable and unmanageable situation. Portions of the more recent Cleveland Fire burned in similar fuels such as those replanted after the Ice House burn.

Water Availability

The amount of water available is a key factor to successful fire suppression in both wildland and structural situations. Urban development is required to provide a water supply adequate for both established fire flows and domestic needs. This is a cost effective approach for higher density development. However, as parcel size increases, adequate water supply becomes problematic due to higher infrastructure costs per parcel.

County requirements in the Design and Improvements Standards Manual restrict parcel size based on the availability of water and location within a structural fire district. These requirements are also incorporated into the locally adopted fire safe regulations.

Peak Load Water Supply. El Dorado Irrigation District (EID) and Georgetown Divide Public Utilities District are the primary water suppliers for the majority of the West Slope. In general, water supply facilities are sized for "maximum day demand" plus fire flows for a development or within an area slated for development. Sufficient storage is provided to meet peak hour demand and to provide pressurized service in the event of disruption of transmission facilities. Both agencies will provide an analysis of upgrades necessary during the project review process for new developments. EID is in the process of preparing a Facilities Master Plan to identify necessary improvements to the existing system. These criteria will be a specific component of the plan.

Fire Safe Regulations

In recognition of the above fire hazard factors, the State of California has enacted legislation requiring local jurisdictions with State Responsibility Areas (SRA) (those areas outside U.S. Forest Service lands, the City of Placerville, and the El Dorado Hills Fire Protection District) to adopt minimum recommended standards pertaining to:

- road standards for fire equipment access;
- standards for identifying streets, roads and buildings;
- minimum private water supply reserves for emergency fire use; and
- fuel breaks and greenbelts to achieve fuel reductions.

With certain exceptions, all new development and construction in SRAs after July 1, 1991, shall meet the new standards. The State requirements will not supersede more stringent local regulations.

The County adopted these regulations in 1991, in many cases exceeding the minimum requirements with long standing requirements. These regulations will provide a great deal of improvement of fire safety in future development. However, existing development is exempt from the regulations. Therefore, many homes in the rural portion of the County do not meet these minimums. This is a significant problem since the inhabitants are potentially at great risk from fire hazards.

Defensible Space. The concept of defensible space is the cornerstone of fire safe regulations. The intent is to reduce the intensity of a wildfire by reducing the volume and density of fuels to provide increased safety for fire equipment and evacuating civilians as well as a point of attack or defense from a wildfire. The area is characterized by the establishment and maintenance of emergency vehicle access, emergency water reserves, street names, building identification, and fuel modification measures. The basic requirement is to provide a minimum of 30 feet fuel clearance from all structures and roads.

Structural Triage. Implementation of defensible space concepts on new and existing development will prevent the responding firefighters from resorting to what is called "Structural Triage." This amounts to a virtually instantaneous, yet trained decision to single out the structures that can be saved during a wildfire because of advanced preparation by the owners (i.e., adequate defensible space). This is not a pleasant alternative to most homeowners. Therefore, education and information is needed to help prevent implementation of this triage.

Fire Agencies

Due to mutual aid agreements and the desire for rapid initial attack, agencies respond to virtually any fire based within the jurisdiction depending on the quickest possible response time determined by Central Dispatch. In the past, the lines of responsibility were more defined. Today with the increase of residences located in the "urban-wildland interface," the distinction has become less defined. A structural fire can spread to become a wildland fire and vice-versa. Most agencies are now equipped and trained to deal with both situations.

Wildland Fire Agencies. Wildland fire control in El Dorado County is the responsibility of either the U.S. Forest Service, the California Department of Forestry and Fire Protection (CDF&FP), or local fire districts. On Federal lands, the U.S. Forest Service or the Bureau of Land Management (BLM) respond to wildland fires. The CDF&FP covers the western half of the West Slope to an area just east of Pollock Pines. Approximately half of the non-Federal lands making up El Dorado County are currently classified as State Responsibility Areas in which the State primarily is responsible for fire prevention and suppression (PRC 4102). By law, it is the policy of CDF&FP that any uncontrolled fire that threatens to destroy life, property, or natural resources will be responded to and abated by the California Department of Forest and Fire Protection (PRC 4104). CDF&FP extensively trains and equips its personnel for the tasks of both structural and vehicle fire suppression in order to fulfill its statutory responsibilities. CDF&FP has four stations in El Dorado County housing eight engines, two bulldozers, and three lookout stations. The U.S. Forest Service provides mutual aid to CDF, at times providing four to six engines per day. In addition, six engines from Amador County may be used in mutual aid situations (Gilbert, 1990). The U.S. Forest Service has jurisdiction over all fires in the Eldorado National Forest.

With regard to preventing property loss by fire, CDF&FP currently comments on rural developments within State Responsibility Areas and has the responsibility for implementation of State-legislated fire safety standards (PRC 4290). The CDF&FP annually makes inspections on rural dwellings throughout El Dorado County for defensible space clearances in order to mitigate potential property loss (PRC 4291). Unfortunately, the majority of this effort is limited to complaint response due to limited funding.

Structural Fire Agencies. The responsibility for structural fire suppression technically depends on the location of the fire. Generally, the California Department of Forestry and Fire Protection (CDF&FP) has jurisdiction in private wildland and structural fire situations outside of a structural fire protection district. Within structural fire protection districts and incorporated cities, fire protection districts are responsible for structural and wildland fires.

Wildland Fire Statistics

Historic Fires. On the average, larger fires (greater than 20 acres) occur every 7 to 14 years, usually during periods of extreme weather patterns.

The Historical Fires Map (Figure 6-3) outlines areas of CDF jurisdiction where fires have burned 20 or more acres. The map indicates most of the large fires have occurred in the western portion of El Dorado County. The Historical Fire Map also identifies three major fires that occurred in the U.S. Forest. These fires were called Camp 7 and Ice House, both on October 31, 1959, and Pilliken burn, August 22, 1973. These fires burned in central El Dorado County. Not shown on the Historical Fires Map is Wrights Fire which engulfed more than 3,500 acres in the Eldorado National Forest in 1981 (Dougherty, 1990), and the Cleveland Fire of 1992 burned 24,580 acres, destroyed 43 homes, and killed two firefighters. (This map is in the process of being updated by CDF&FP staff.)

CDF maintains fire incident statistics in El Dorado County. These statistics include fires involving 20 acres or less and fires of more than 20 acres of timber, brush, woodland, or grass. Table 6-2 summarizes fires in 1989. According to CDF&FP, an average of 300 fires occur in El Dorado County every year, 95 percent of which are started by people. In 1989, 77 fires were started by lightning, and 44 fires were person-caused, affecting a total of 73 acres in the Eldorado National Forest (Dougherty).

TABLE 6-2 ACRES BURNED BY VEGETATION TYPES					
Size of Fire	Timber	Brush	Woodland	Grass	TOTAL
Number of fires 20 acres or less	6	18	12	43	79
Acreage involved	48	61.6	84	168.5	362.1
Number of fires over 20 acres	0	3	1	3	7
Acreage involved	0	96	25	136	257
TOTAL ACREAGE	48	157.6	109	304.5	619.1
Source: ERC Environmental and Energy Services Co.; California Department of Forestry, 1990					

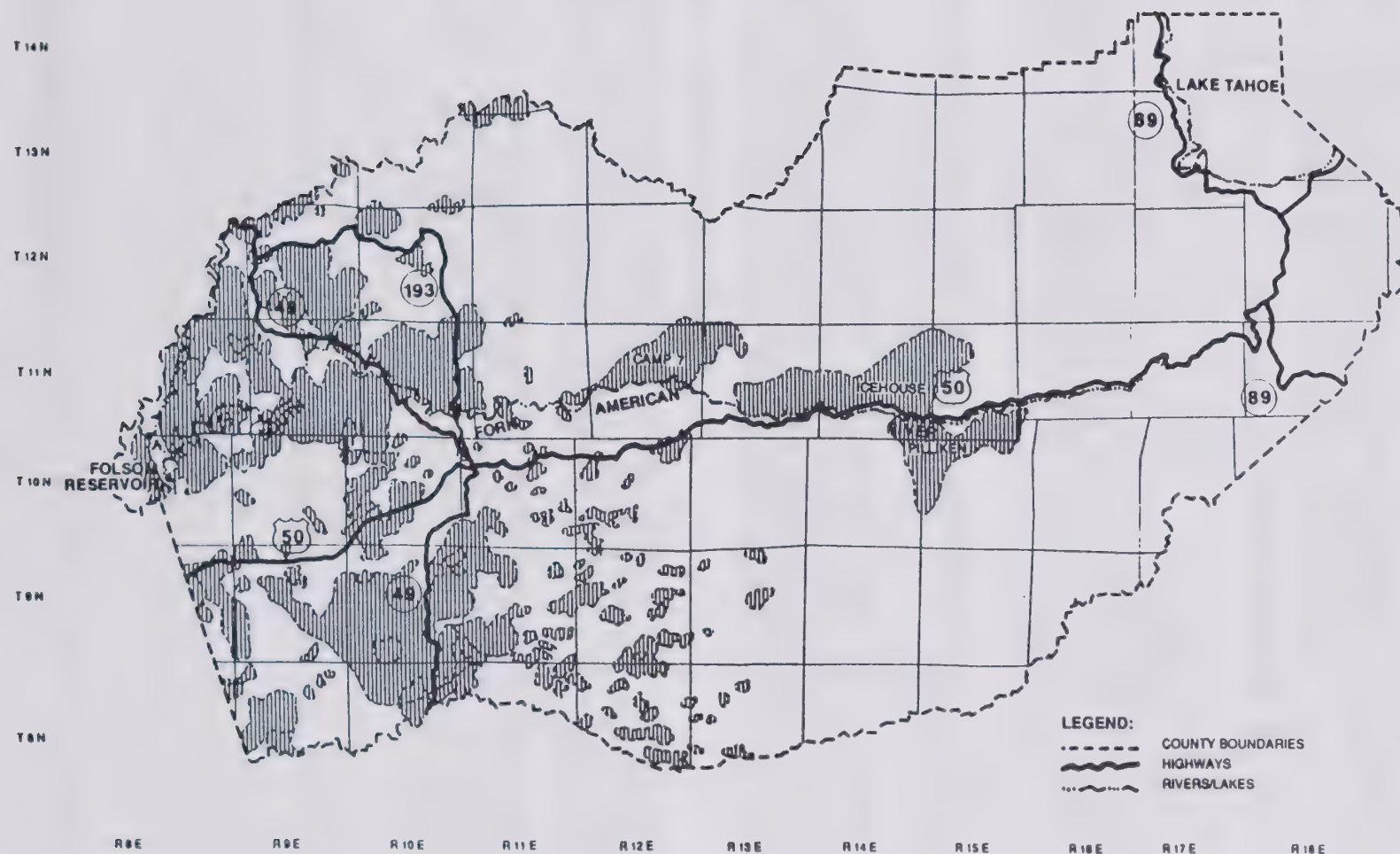
The seven fires (in CDF jurisdiction) that burned more than 20 acres per fire in 1989 are listed below, and the locations are generally shown in Figure 6-3.

1. T7N R9E SE ¼ of section 19 35 acres (brush)
2. T9N R10E NW ¼ of section 30 38 acres (brush)
3. T10N R12E SE ¼ of section 24 23 acres (brush)
4. T5N R11E NE ¼ of section 1 25 acres (woodland)
5. T11N R10E SW ¼ of section 17 75 acres (grass)
6. T6N R11E SE ¼ of section 35 31 acres (grass)
7. T5N R11E NE ¼ of section 1 30 acres (grass)

EL DORADO COUNTY

GENERAL PLAN

**Figure: 6-3
Historical Fires**



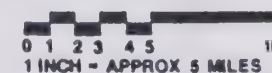
C.D.F. Fires of 20 Acres or Larger 1929-1938, 1950-1971

Major Fires in U.S.F.S. Areas

Icehouse - 10/31/59

Camp 7 - 10/31/59

Paliken - 8/22/73



NOISE

Excessive noise levels can interfere with communication, disrupt sleep, and in extreme cases, cause physiological impacts, such as hearing loss. In many situations, the effects are subjective and noise may be perceived differently from one individual to another. Land uses such as schools, churches, hospitals, convalescent homes, and single family neighborhoods are particularly sensitive to noise. This section discusses guidelines and methods for reducing noise to acceptable levels throughout El Dorado County.

The State of California mandated the inclusion of a noise element in county and city general plans in 1971. California Government Code Section 65302(f) states that noise elements shall analyze and quantify, to the extent practicable, as determined by the legislative body, current and projected noise levels for all the following sources:

- highways and freeways;
- primary arterials and major local streets;
- on-line railroad operations and rapid transit systems;
- commercial, general aviation, heliport, helistop, and military airport operations, aircraft overflights, jet engine test stands, and all other ground facilities and maintenance functions related to airport operation;
- local industrial plants; and
- other ground stationary sources identified by local agencies as contributing to the community noise environment.

A key use of the noise section is to provide information so that sensitive land uses are not located near incompatible noise generating sources. Section 65302(f) of the California Government Code states that "noise contours shall be used as a guide for establishing a pattern of land uses in the land use element that minimizes the exposure of community residents to excessive noise."

Senate Bill 860, which became effective in 1976, directed the California Department of Health Services, in coordination with the Governor's Office of Planning and Research, to prepare Noise Element Guidelines. According to the guidelines, the fundamental goals of noise elements are:

- To provide sufficient information concerning the community noise environment so that noise may be effectively considered in the land use planning process. In so doing, the necessary groundwork will have been developed so that a community noise ordinance may be used to resolve noise complaints.
- To develop strategies for abating excessive noise exposure through cost-effective mitigating measures in combination with zoning, as appropriate, to avoid incompatible land uses.

- To protect those existing regions of the planning area whose noise environments are deemed acceptable and also those locations throughout the community deemed "noise sensitive."
- To use the definition of the community noise environment in the form of Community Noise Equivalent Level (CNEL) or Ldn noise contours as provided in the noise element for local compliance with the State Noise Insulation Standards. These standards require specified levels of outdoor to indoor noise reduction for new multi-family residential constructions in areas where the outdoor noise exposure exceeds CNEL (or Ldn) 60 dB. (Note: Ldn, the day-night average noise level, is the 24-hour average of noise intensity, with 10 dBA added for nighttime noise. CNEL, the community equivalent noise level, is similar to Ldn but adds 5 dBA to evening noise.)

"Ambient" noise is a composite of all noise sources, near and far, which constitute the normal or existing levels of environmental noise at any given location. In general, the more a noise exceeds the ambient noise, the more intrusive and less acceptable the noise is to the community. Noise also becomes more intrusive if it occurs intermittently or if the sound levels undulate. Noise that is constant is usually less irritating as people become less aware of it over time. Similarly, noise that occurs during periods of quiet, such as in the evening when most people are resting or engaged in talking, resting, listening to the radio or watching television, is more intrusive than noise that occurs in the middle of the day.

Sound is measured in decibels (dB) which describe the relative levels of sound intensity. The scale is logarithmic which means that a sound of 20dB is actually ten times louder than a sound of 10dB, and 30dB is 100 times louder than a sound of 10dB. Although sudden or occasional noises are intrusive, the 24-hour average noise level is the most commonly used measure of the ambient noise environment. This average, weighted for increased sensitivity of people to noises during the nighttime hours, is referred to as the Day-Night Average Level (Ldn).

Highways and Vehicular Traffic

A major source of noise in El Dorado County is vehicular traffic which includes automobiles, trucks, buses, and motorcycles. The level of vehicular traffic noise varies with the volume of traffic, the percent of trucks, the speed of traffic, and the distance from the roadway. Noise generated by vehicular traffic is greatest along State Route 49, U.S. Highway 50, and State Route 193. Based on the daily traffic volumes, significant noise levels also occur along various segments of Cameron Park Road, Green Valley Road, Missouri Flat Road, Pleasant Valley Road, and South Shingle Road. Noise contours for County roadways are shown on the El Dorado County Noise Contour Maps.

Airports

El Dorado County has four public use airports: Placerville, Georgetown, Cameron Air Park, and Lake Tahoe. In addition, the former Mather Air Force Base, located in Sacramento County, is near the border with El Dorado County. Based on accepted noise impact thresholds, all land

uses are generally considered impacted by noise in excess of 75 dB CNEL; and more sensitive land uses such as residences, hospitals, retirement homes, etc., are considered significantly impacted by noise in excess of 65 dB CNEL. Even though portions of the land affected by the airports have previously been urbanized, remaining vacant areas in addition to redevelopment proposals make the discussion of aircraft noise relevant to land use decision-making. Noise contours for each of the airports affecting noise in El Dorado County are shown in the following figures:

- Figure 6-4: Placerville Airport Noise Contours
- Figure 6-5: Georgetown Airport Noise Contours
- Figure 6-6: Cameron Airpark Airport Noise Contours
- Figure 6-7: South Lake Tahoe Airport Noise Contours
- Figure 6-8: Mather Air Force Base Noise Contours

Existing facilities, operations, and noise contours for each of El Dorado County's four airports, and for Mather Air Force Base (AFB), are described below.

Placerville Airport. Placerville Airport is located approximately three miles southeast of the City of Placerville. The airport is used for private, commuter, business, and recreational air travel. It has one runway 4,200 feet long and 75 feet wide. This airport has 195 based aircraft with a fleet mix of fixed wings (95 percent), jets (2.5 percent), and helicopters (2.5 percent). In 1992, there were 92,000 airport operations. The majority of flights occur during the day with a peak in operations occurring in the summer. Five small businesses operate at the airport.

The noise contours for the Placerville Airport are shown in Figure 6-4. The Airport Land Use Commission adopted 65 dBA CNEL as the contour within which sensitive land uses, including residences, should not occur. Noise contours were updated in 1991, therefore, the contours shown in Figure 6-4 are current.

Georgetown Airport. Georgetown Airport is located approximately three miles northwest of Georgetown. The airport is used for private, commuter, business, and recreational air travel and has one runway 2,985 feet long and 60 feet wide. Two small businesses operate at the airport, and a study has just been completed to evaluate the feasibility for developing 34 additional acres of commercial/industrial properties.

Georgetown Airport is base to 20 aircraft with a fleet mix of fixed wings (98 percent) and helicopters (2.0 percent). In 1992, airport operations numbered 22,500. The majority of flights occur during the day with an operational peak in the summertime. Noise contours for the Georgetown Airport are shown in Figure 6-5.

Cameron Air Park Airport. Cameron Air Park Airport is part of Cameron Airpark Estates, a residential area. It is located in Cameron Park. The airpark is small and is used primarily for commuter and recreational flying. Residences are located adjacent to the runway, and a small flying school is operated at the airpark which has one runway 4,000 feet long and 50 feet wide.

No commercial aircraft use the airpark and aircraft mix is primarily small private Cessnas, Bonanzas, and Pipers. The majority of flights occur in the evenings, and on weekends in 1992 the airport had 30,000 operations.

Cameron Airpark Airport is located in the north-central portion of Cameron Park Estates, exposing residential areas to aircraft takeoff and landing activities. Noise contours for this airport are shown in Figure 6-6. The airport implements a pilot education program to reduce noise impacts on nearby residential areas. It should be noted that the Cameron Park Estates Subdivision is unique in that a number of homes are located within close proximity to the runway allowing approximately 30 homes to have large garages which can serve as aircraft hangars allowing pilots to taxi from their homes directly onto the runway.

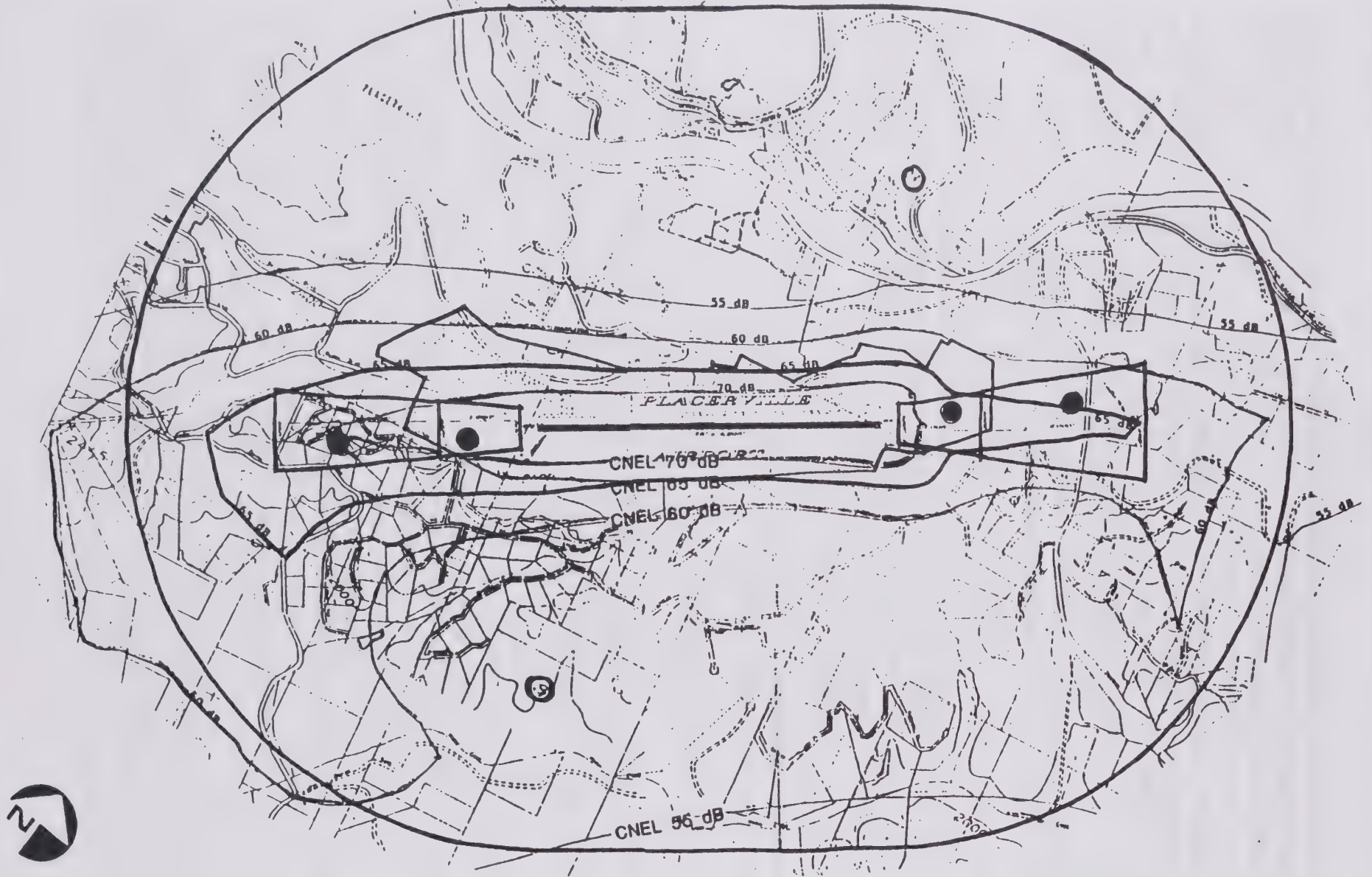
Lake Tahoe Airport. Lake Tahoe Airport is located in the Lake Tahoe Basin. The airport is used for both general aviation and commercial air travel and has one runway 8,544 feet long and 150 feet wide. There were 31,000 operations in 1992 with the number expected to increase to 40,000 in future years. The recently approved Master Plan for the South Lake Tahoe Airport will allow a three-fold increase in commercial operations and will allow construction of airplane hangars. The airport currently has 60 based fixed wing aircraft.

The noise contours for the airports are shown in Figure 6-7. As of 1990, no residences were located within the 60 of 65 dBA contour.

Mather Air Force Base. Mather AFB is located on 5,847 acres of government property, 12 miles east of the City of Sacramento within Sacramento County. Existing flight facilities at the base include two parallel runways. The primary runway is 11,300 feet long and 300 feet wide while the secondary runway is 6,100 feet long and 150 feet wide. Both runways are lighted, and the primary runway is equipped with precision navigation systems for all weather operations. Other flight facilities include an integrated system of taxiways, aprons, parking aprons, and navigational aids capable of handling the C-5A Galaxy, the largest aircraft in the Air Force inventory.

Noise impacts from Mather AFB primarily occur in Sacramento County. Regular flight patterns do not cross El Dorado County, but occasionally wind conditions make it necessary for pilots to fly over the northwestern part of the County. The noise contour produced in El Dorado County during those flights is presented in Figure 6-8. The El Dorado Planning Department reports that citizens have not complained about the occasional flyovers by Mather AFB pilots.

Helipads. Barton Memorial Hospital, located in South Lake Tahoe, has a helipad. The pad is used by Life Flight helicopters to bring patients from the scene of the accidents to the hospital or to transfer patients to different hospitals. The hospital does not own any helicopters; those arriving at the facility are all from Life Flight. Most helicopter flights occur during the day, and approximately 75 flights occur throughout the year. The facility has not received any complaints about the helicopter noise.

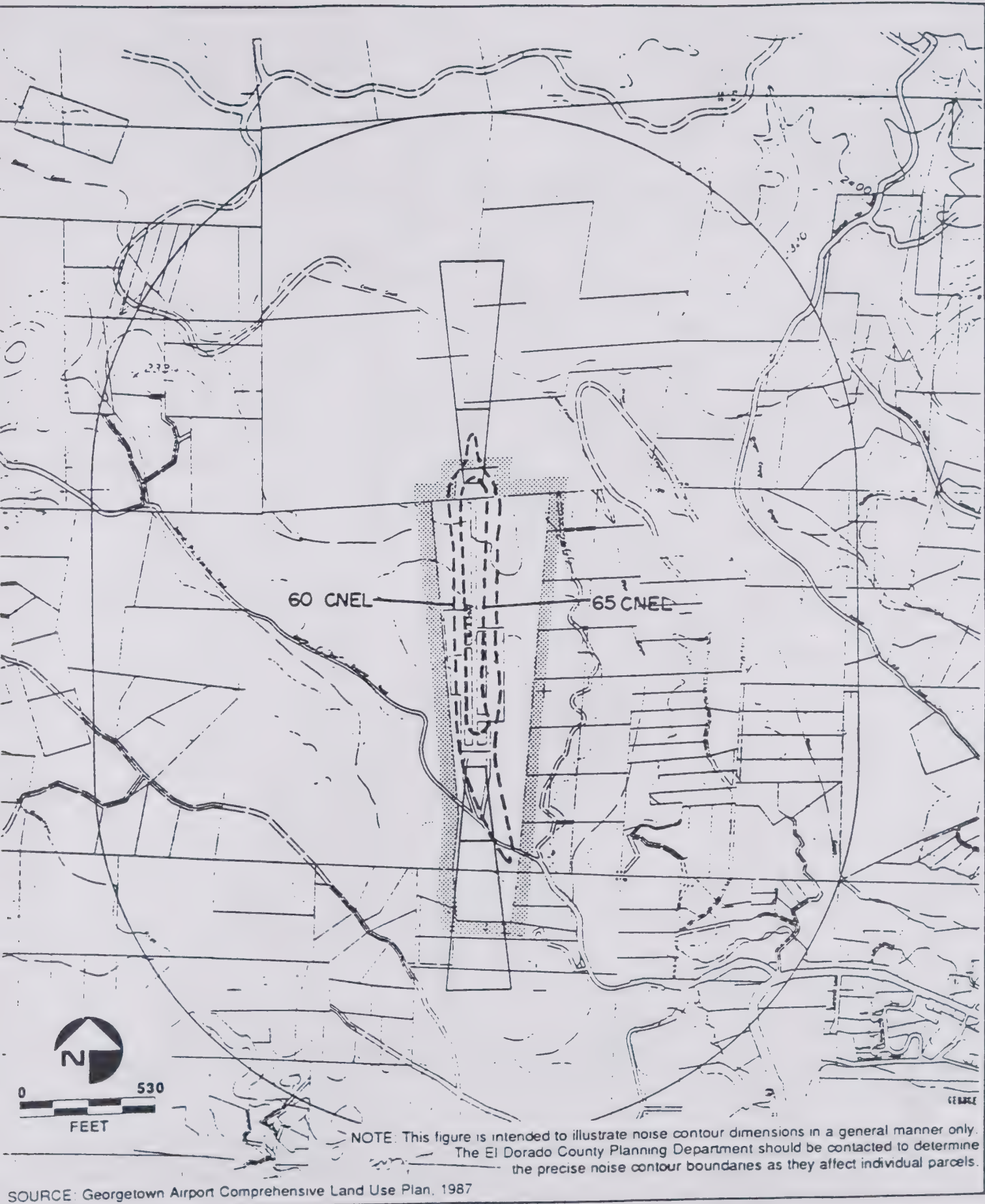


NOTE: This figure is intended to illustrate noise contour dimensions in a general manner only.
The jurisdiction's planning department should be contacted to determine
the precise noise contour boundaries as they affect individual parcels.

NOTE: THESE NOISE CONTOURS HAVE BEEN ADOPTED
BY THE CITY AND AIRPORT LAND USE COMMISSION,
AND APPROVED IN CONCEPT BY THE BOARD OF SUPERVISORS,
SUBJECT TO THE PREPARATION OF AN EIR WHICH HAS
NOT YET COMMENCED.

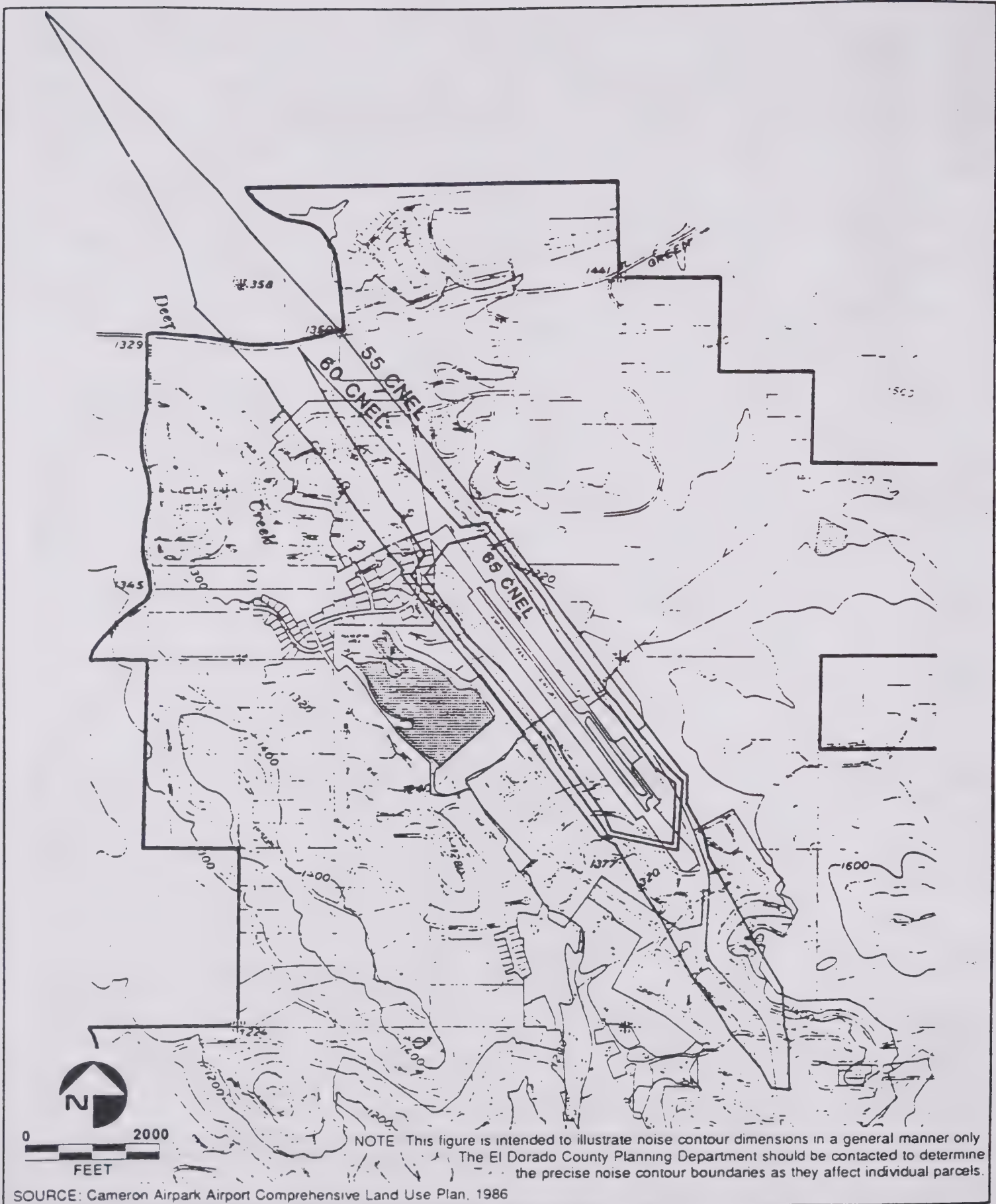
Placerville Airport Noise Contours

Figure: 6-4



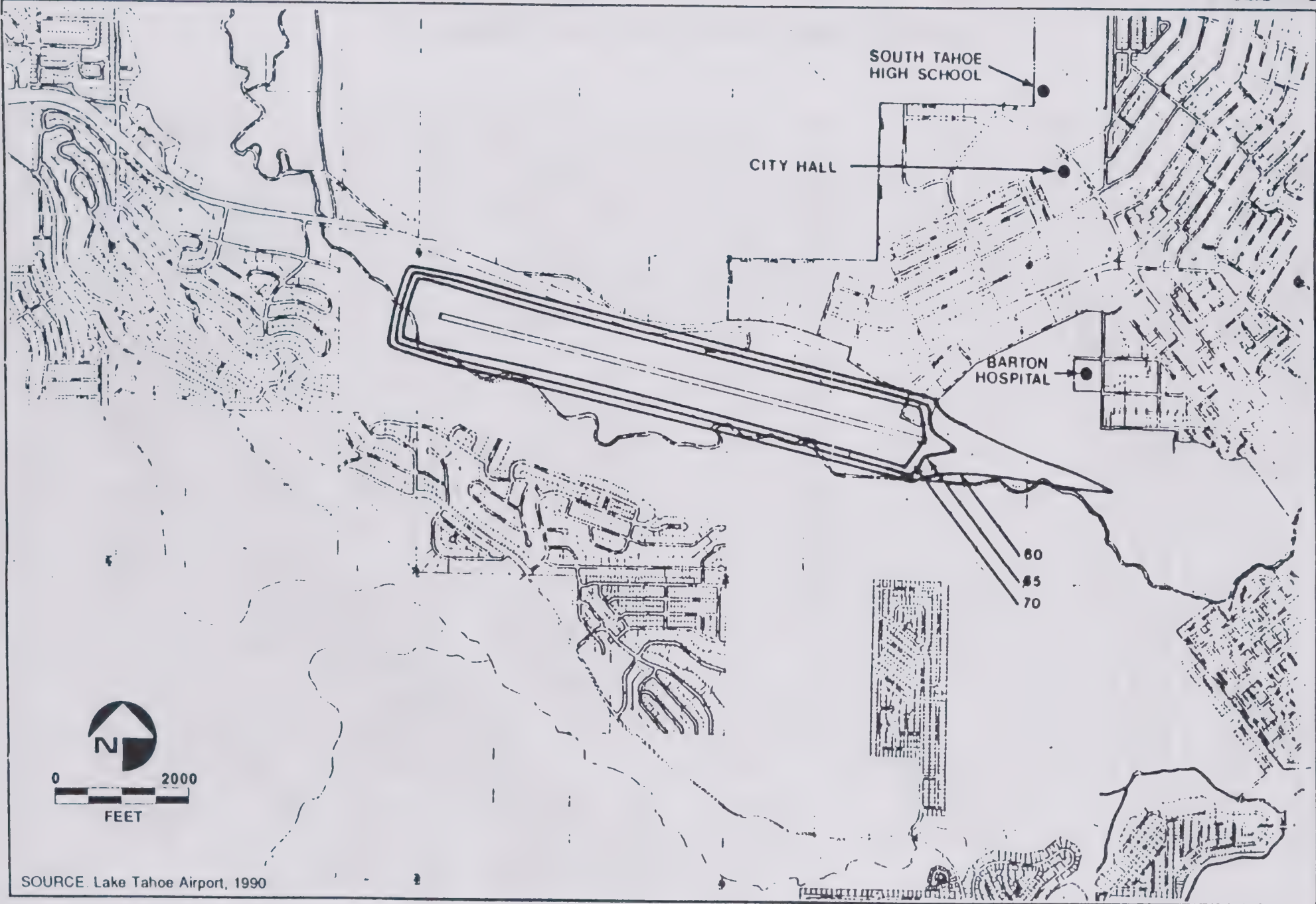
Georgetown Airport Noise Contours

Figure: 6-5



Cameron Airpark Airport Noise Contours

Figure: 6-6



SOURCE: Lake Tahoe Airport, 1990

South Lake Tahoe Airport Noise Contours

Figure: 6-7



Mather Air Force Base Noise Contours

Recreation

El Dorado County is a popular destination for recreational activities due to the U.S. Forest lands and the abundance of lakes including Lake Tahoe. Complaints about recreation related noise come primarily from residences located near forest land, rivers, or lakes. The complaints deal almost entirely with off-highway vehicles (OHVs), jet skis, and motorboats.

Industrial Activities

Industrial noise sources in El Dorado County are generally limited to lumber mills, mineral extraction, and processing. Many of these companies have been in existence for a number of years and in some cases are non-conforming uses pre-dating land use regulations in the County. Many of these operations are surrounded by non-conforming residential land uses. Future development in the vicinity of these industrial facilities needs to consider the compatibility of these uses with the noise environment as defined by these industrial activities.

HAZARDOUS MATERIALS AND WASTES

Much of the information contained in this section is from the Executive Summary of the El Dorado County Hazardous Waste Management Plan (CHWMP) of 1988. The plan provides a synopsis of the hazardous waste setting in El Dorado County and recommends goals, objectives, policies, and programs for hazardous waste management and facility siting.

A "hazardous material" is a substance or combination of substances that, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may pose a potential hazard to human health or the environment when handled improperly. A "hazardous waste" is a hazardous material that: 1) has no use or reuse and is intended to be discarded; or 2) is recyclable. A hazardous waste, because of its nature, presents the same danger that hazardous materials do. Proper management of hazardous materials and hazardous wastes are integrated; both substances present the same threat to the environment when not properly managed.

The following discussion is intended to summarize hazardous material and waste conditions in the County and the implications of their handling, storage and disposal on other land uses.

Regulatory Overview

State and Federal Framework. The management of hazardous materials and hazardous wastes in El Dorado County occurs within the context of a complex interaction of Federal, State and local requirements. The primary pieces of Federal legislation governing hazardous materials are:

- Resource Conservation and Recovery Act (RCRA) of 1976 - hazardous waste management;

- Hazardous and Solid Waste Amendments (HSWA) of 1984 - hazardous waste management;
- Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 - cleanup of contamination;
- Superfund Amendments and Reauthorization Act (SARA) of 1986 - cleanup of contamination;
- Emergency Planning and Community Right-to-Know Regarding Extremely Hazardous Substances - SARA Title III; and
- Federal Medical Waste Tracking Act of 1988.

Primary direction in California comes from the:

- California Hazardous Waste Control Act of 1972 - Hazardous Waste;
- Safe Drinking Water and Toxic Enforcement Act of 1986 or "Proposition 65" - Hazardous Waste;
- Hazardous Substances Act (HSA) of 1981 - Cleanup of Contamination;
- California Environmental Quality Act (CEQA) of 1970 - Environmental Impact Report;
- Hazardous Waste Management Planning and Facility Siting - "The Tanner Bill";
- Hazardous Materials Storage and Emergency Response - AB 2185; and
- California Medical Waste Management Act of 1990.

Local Framework for Hazardous Waste Facility Siting

The Tanner legislation (AB 2948) authorizes California counties to prepare County Hazardous Waste Management Plans (CHWMPs) and identify potential areas for the siting of needed future hazardous waste facilities. The Department of Toxic Substances Control (DTSC), a division of the California Environmental Protection Agency, administers the local hazardous waste planning process. The El Dorado CHWMP has been prepared in accordance with the DTSC guidelines.

The El Dorado CHWMP encourages proper management practices by all hazardous waste generators in El Dorado County including industry, small businesses, government, and households. Appropriate management of hazardous wastes will be achieved by County-level implementation of the policies, facilities, siting plans, programs, and ordinances as described in the CHWMP. The plan is compatible with Federal and State regulations and programs and, for efficiency, incorporates major hazardous waste materials requirements.

The goals and objectives of the El Dorado CHWMP are defined below.

Goals:

1. To protect the health, safety, and property of the residents and visitors to El Dorado County and minimize damage to the environment from the adverse effects of hazardous wastes while maintaining the economic viability of the County and the State.
2. To manage hazardous wastes in a way consistent with sound management approaches in this order of priority: source reduction, recycling and reuse, treatment (on-site and off-site), and residuals disposal.
3. To develop a plan that will fulfill the criteria established by DHS to meet State-legislated local hazardous waste management plans (AB 2948, Tanner) and acquire the funding sources to implement the plan.
4. To assess and accommodate the current and future needs for hazardous waste management practices and facilities for proper recycling, transfer, treatment, storage of hazardous wastes, and disposal of treated residuals.

Objectives:

1. **Ensure Proper Management of Hazardous Materials and Wastes.** Bring all businesses and public and private institutions into compliance with applicable Federal, State, and local regulations for generation, storage, transportation, packaging, and handling of hazardous materials, including wastes.
2. **Promote Source Reduction and Waste Minimization.** Promote reduction and, where feasible, elimination of hazardous wastes by the generators as the most preferred hazardous waste management strategy. Where source reduction is not feasible, promote recycling and other waste minimization techniques that reduce the amount of hazardous wastes that may require treatment and/or disposal.
3. **Develop Public Education Programs.** Implement a program to educate El Dorado County's residents, business managers, work force, and public officials on the proper management of hazardous wastes in their homes, work places, recreational facilities, and public buildings.
4. **Improve the Management of Small Business and Household Hazardous Wastes.** Increase the awareness of El Dorado County residents and small businesses about hazardous wastes generated by them and encourage the proper disposal of those wastes.
5. **Promote Clean-up of Contaminated Sites.** Develop a program to track contaminated sites and monitor State and Federal efforts to assure proper clean-up thereby reducing the current and future number of contaminated sites.

6. **Minimize Improper and Illegal Disposal.** Minimize hazardous waste from being illegally or improperly disposed of in El Dorado County's solid waste stream, in the public sewer systems, and on public or private property.
7. **Eliminate Land Disposal of Untreated Hazardous Waste.** Ensure that all hazardous wastes generated in El Dorado County are properly treated before disposal at residual repositories by May 8, 1990, as required by State law.
8. **Ensure Adequate Facility Capacity.** Ensure that sufficient capacity exists, both within and outside El Dorado County, to treat, store, transfer, and dispose of El Dorado County's hazardous wastes through the year 2000 (State-specified planning period).
9. **Reduce Export of Hazardous Waste.** Reduce El Dorado County's reliance on out-of-County facilities for treatment, storage, and disposal of hazardous waste through source reduction, waste minimization, and through siting and development of economically, geographically, and environmentally appropriate facilities within El Dorado County.
10. **Establish Agreements with Exporting and Importing Counties.** Establish interjurisdictional agreements to provide the off-site capacity needed for hazardous waste treatment and residuals disposal according to each jurisdiction's fair share of the hazardous waste stream and environmental suitability for different types of facilities.
11. **Develop Facility Siting Criteria and Identify Potential Areas.** Develop siting criteria and identify general areas consistent with those criteria for hazardous waste facilities.
12. **Ensure Environmentally Sound Development and Operation of Waste Management Facilities.** Coordinate with DHS to ensure that existing and future hazardous waste facilities for treatment, storage, and disposal in El Dorado County are developed and operated in an environmentally sound manner.
13. **Implement Programs for Monitoring and Enforcement.** Revise and expand County programs, to the extent of delegated authority, to monitor and enforce existing and future local, State, and Federal hazardous waste management laws and regulations.
14. **Ensure Emergency Response Capability.** Implement programs to reduce emergency incidents and to improve existing programs providing response to hazardous material discharges to the environment.
15. **Promote Safe Transport.** Provide for the safe transport of hazardous wastes from the source of generation to points of management through proper routing and emergency response planning.

16. **Coordinate Hazardous Waste Planning with Local Plans and Programs.** Coordinate planning for hazardous materials and hazardous waste management with El Dorado County's land use planning process to ensure compatible land use development and with existing hazardous materials and waste management programs to provide comprehensive and effective management.
17. **Coordinate with Regional and State Plans.** Implement a process to coordinate County waste management programs with other appropriate counties, the Tahoe Regional Planning Agency, and program efforts of the States of California and Nevada. Intercounty coordination is recommended with adjacent counties facing similar hazardous waste management concerns and with counties receiving hazardous wastes exported from and through El Dorado County.
18. **Promote Public-Private Sector Cooperation.** Implement programs in the near term that strengthen and expand the public-private cooperation in managing hazardous materials and wastes.
19. **Promote Public Participation.** Assure that the interests and inputs of the public, industry, environmental organizations, and local and State government are considered in the preparation and approval of the El Dorado County Hazardous Waste Management Plan through the implementation of a public participation program.

Existing and Needed TSD Facilities

Currently, no hazardous waste treatment, storage and/or disposal (TSD) facilities exist within El Dorado County. Periodic hazardous waste collection events are being held in Placerville and South Lake Tahoe. There are at least three sites which accept waste oil from the public on a daily basis. Those sites are the Union Mine Landfill, the Department of Transportation corporation yard, and the South Tahoe Refuse transfer station. The Environmental Management Department, El Dorado Hills Fire Department, El Dorado County Fire District, Lake Valley Fire Department, South Tahoe Refuse Company, Inc., and El Dorado Disposal Company, Inc., are in the process of siting storage facilities for household and small business hazardous wastes.

As hazardous waste generation increases by the year 2000, there will be a greater need for treatment capacity. Fully implementing source reduction and waste minimization efforts could reduce estimated treatment capacity for residuals disposal. Because waste oil will remain a significant portion of the County's total hazardous waste stream, continued collection and subsequent recycling of waste oil ranks as the County's highest need.

Siting Criteria

Tanner legislation (AB 2948) and the DTSC Guidelines for Preparation of CHWMPs require counties to develop and apply criteria for the siting of future hazardous waste facilities and to identify potential general areas or sites for facilities. Future facility siting is premised on consistency with the County's siting criteria and the general areas identified in the CHWMP.

El Dorado County recognizes the DTSC Guidelines criteria to protect public health, safety, and the environment, particularly aquifers; the Tahoe Basin; and unsafe transportation corridors. The criteria are consistent with the County's General Plan and the goals, objectives, and policies of this Plan. The siting criteria are summarized as follows:

- Flood Plains
- Unstable Soils
- Seismicity
- Habitat of Endangered Species
- Wetlands
- Major Aquifer Recharge Areas
- Distance from Residences
- Distance from Immobile Populations
- Proximity to Major Transportation Routes
- Permeable Strata and Soils
- Nonattainment Air Areas
- Agricultural Preserves
- Depth to Groundwater
- Proximity to Public Facilities
- Proximity to Waste Stream Generators
- Zoning
- Recreational, Cultural or Aesthetic Areas
- Mineral Resource Areas
- State and Federal Lands

Potential Areas for Hazardous Waste Facilities

The criteria were applied County-wide on a gross scale to identify potential areas suitable for consideration for future facility siting. Several criteria could not be mapped on a County-wide scale because of incomplete information or the need for site-specific data. The potential general areas identified in the Tanner Plan (along the Sacramento County border south of U.S. Highway 50 and in small areas west of Diamond Springs) may not meet the siting criteria on a site-specific basis. Future industrial TSD facilities should be located in areas zoned industrial where water, sewer, and emergency services are provided or made available prior to project approval.

Hazardous Waste Management Hierarchy in El Dorado County

A "waste management hierarchy" guides State and Federal decision making and provides the framework for the CHWMP. The hierarchy consists of a set of preferred waste management options in descending order of priority:

- **Source Reduction** Involves steps to reduce and/or avoid waste generation.
↓
- **Waste Minimization
(Recycling)** The use of recycling and treatment techniques
at the source of generation.
↓
- **Treatment** The reduction/elimination of toxic hazardous properties.

Example: Thermal Destruction (The process of applying heat under controlled conditions to promote the degradation and/or detoxification of hazardous waste materials).

Example: Stabilization, Solidification (The treatment process of reducing the mobility of a hazardous waste material, often by mixing with cement or other material, to form an insoluble solid).

- ↓
- **Residual Repository** A hazardous waste disposal facility for collection of
residuals from hazardous waste treatment facilities and
other irreducible, stabilized, or detoxified hazardous
wastes.
↓
- **Land Disposal of
Untreated Wastes** The disposal of untreated hazardous wastes
on or into land (banned in 1990).

Source Reduction Potential in El Dorado County

It is estimated that source reduction measures in El Dorado County could result in approximately a ten percent reduction in total hazardous waste generation. Waste reduction potential is limited because of the small business nature of the generation and dominance of waste oil and miscellaneous wastes in the hazardous waste stream. Source reduction potential for miscellaneous wastes is estimated to be approximately 12 percent, dye and paint sludges and resins five percent, halogenated solvents nine percent, and nonhalogenated solvents one percent. The source reduction potential for waste oil is low because of the corresponding damage to equipment when oil changes are less frequent. Also because of the existence of recycling and power generating facilities which use waste oil, source reduction is unnecessary. The remaining

12 DHS waste groups are thought to constitute only a small portion of the County's estimated waste streams, and source reduction activities directed at these wastes are unlikely to produce significant results.

Current and Future Hazardous Waste Quantities

In comparison with other California counties, El Dorado County has a small population, a modest number of small industries, and a rural, mountainous setting. In 1986, the County generated an estimated 3,782 tons of hazardous waste (amount estimated via the 1985 EPA "National Small Quantity Hazardous Waste Generator Survey" Methodology). Analysis indicates most wastes are unmanifested within the County. The wastes are generated by approximately 1,011 small businesses and industries, more than 40,000 households, as well as institutions and governmental agencies.

Hazardous waste management is complicated by the geographical split of the County by the Sierra Nevada Mountains into two population centers: the South Lake Tahoe area in the Lake Tahoe Basin east of the Sierra, and the Placerville-El Dorado Hills population corridor along U.S. Highway 50 on the Western Slope. More than 70 percent of the population lives outside the incorporated cities of Placerville and South Lake Tahoe. More than half of the County is in Federal ownership, largely within the Eldorado National Forest. The Lake Tahoe Basin is subject to environmental and regulatory controls under the Tahoe Regional Planning Agency Master Plan.

Small Business and Industry Hazardous Waste Generation

In 1986, small business and industry accounted for the generation of an estimated 3,495 tons (of the 3,782 total tons in the County) of hazardous waste in El Dorado County (see Table 6-3). These hazardous wastes were generated by one large-quantity generator and approximately 1,011 small-quantity generators. Table 6-4 shows the types and quantities of hazardous waste produced by small businesses and industry. Not considering future source reduction efforts, in the year 2000, El Dorado County expects an increase in hazardous waste generation to a level of 5,581 tons originating from more than 1,614 small businesses and industries (assuming a 3.4 percent annual growth rate).

TABLE 6-3
SMALL BUSINESS AND INDUSTRY HAZARDOUS WASTE GENERATION

Generator	Number	Current Quantity (1986) in tons	Future Quantity (2000) in tons
Large Generators generate more than 1000 kg	1	8	13
Small Generators generates less than 1000 kg	1,011	3,487	5,568
Total	1,012	3,495	5,581

Source: El Dorado County Hazardous Waste Management Plan, 1988

TABLE 6-4
TYPES AND QUANTITIES OF HAZARDOUS WASTE GENERATED BY SMALL BUSINESS AND INDUSTRY

DHS 17 Waste Groups	% of Total	1986 (in tons)	2000 (in tons)	Primary Industries
Waste Oil	62.0	2,178	3,479	Construction, trucking, service stations, auto repair
Miscellaneous Wastes	22.0	759	1,212	Same as above
Halogenated Solvents	3.6	125	200	Construction, service stations, manufacturing, auto repair
Nonhalogenated Solvents	3.6	125	200	Same as above
Dye and Paint Sludges and Resins	2.9	101	162	Construction
Nonmetallic Inorganic Liquids	1.4	49	78	Manufacturing, auto repair
Pesticides	1.1	39	62	Agriculture
Nonhalogenated Organic Sludges and Solids	0.9	32	51	Construction, services
Metal-Containing Sludges	0.7	24	38	Services
Metal-Containing Liquids	0.7	23	37	Manufacturing
Organic Liquids	0.6	21	33	Services
PCBs & Dioxins	0.3	11	17	Utilities
Halogenated Organic Sludges & Solids	0.1	4	7	Manufacturing
Cyanide & Metal-Containing Liquids	less than 0.1	1	2	Manufacturing
Nonmetallic Inorganic Sludges	less than 0.1	1	2	Manufacturing
Oily Sludges	0.00	0.00	0.00	—
Contaminated Soil	0.00	0.00	0.00	—

Source: El Dorado County Hazardous Waste Management Plan, 1988

Waste oil is, and will remain, the primary type of hazardous waste being generated from industrial and commercial sources in El Dorado County. It is estimated that 62 percent of the total hazardous waste stream from small business and industry is waste oil. Miscellaneous wastes, consisting largely of used car batteries, ranks second as the major hazardous waste group in both the present and future.

Generators of hazardous waste that transport their waste off-site are required by the Environmental Protection Agency (EPA) to comply with the Uniform Hazardous Waste Manifest system. A manifest, or invoicing document, is used to track the transport of hazardous wastes from "cradle to grave." Federal law requires that generators of more than 100 kilograms (or approximately 220 pounds) of hazardous waste per month manifest their wastes. California State law requires that generators manifest their waste regardless of quantity.

Currently, the majority of hazardous waste shipped off-site from small business and industry in El Dorado County is not manifested. Most small businesses are exempt from manifesting small quantities of hazardous waste because they use commercial collection services which manifest the total volume of hazardous waste under their own manifest. Examples of this practice are waste oil haulers and dry cleaning waste collection services.

Household Hazardous Waste

In El Dorado County, 45,000 households generated an estimated 2,098 tons of hazardous wastes in 1990 or 1.2 percent of the total waste stream. This amounts to 93 pounds per household or 36 pounds per person. It is projected that by the year 2000, more than 160,000 residents of El Dorado County in more than 65,000 households will generate 3,030 tons of hazardous waste per year. These estimates of waste generation were derived from the El Dorado County Household Hazardous Waste Element, 1993.

TABLE 6-5
HOUSEHOLD HAZARDOUS WASTES AND THEIR ASSOCIATED DHS HAZARDOUS WASTE GROUP

Primary Household Hazardous Waste	DHS Waste Group
Used Motor Oil/Grease	Waste Oil
Waste Paints and Dye	Dye and Paint Sludges & Resins
Used Batteries	Miscellaneous Wastes
Household Cleaners	Nonmetallic Inorganic Liquids
Solvents, Thinner, Adhesives	Nonhalogenated or Halogenated Polishes, Solvents
Pesticides	Organic Liquids
	Pesticides
Source: El Dorado County Hazardous Waste Management Plan, 1988	

Waste Clean-Up

Contaminated Sites. Hazardous wastes, or materials that ultimately became hazardous waste (e.g., soil contaminated by leaking underground fuel storage tanks), have been potentially identified at 55 different sites within El Dorado County. With the exception of leaking underground tank sites, potential hazardous substances suspected of being located on any of the 55 sites have yet to be fully characterized or the extent of contamination completely evaluated. Table 6-6 summarizes the responsible agencies, list title, and the number of sites on each list. The complete lists are contained in Section 2 of the CHWMP. For further information on any specific site, readers should contact the listing agency and the El Dorado County Solid Waste and Hazardous Material Division.

TABLE 6-6
SUMMARY OF POTENTIAL CONTAMINATED SITES

Responsible Agency	List	Number of Listed Sites
Fed EPA	National Priorities List	0
Fed EPA	CERCLA	8
Cal EPA	Bond Expenditure Plan List	0
Cal EPA	Abandoned Site Program Information System	25
OPR	Hazardous Waste & Substance Site List	22
SWRQCB	Solid Waste Disposal Site List	14
DEM	Active Leaking Underground Tank Site List	30
Total Number of Listed Sites		84
Total Number of Different Sites		55
Source: Solid Waste and Hazardous Materials Division Records		

Underground Tank Sites. El Dorado County has implemented an underground storage tank permitting and inspection program by ordinance. As of July 1, 1993, there were approximately 465 registered and permitted underground tanks in the County. Over 100 of these tanks were found to have unauthorized releases of petroleum products. The majority of these releases have occurred from overfills and spills during filling. Some are due to direct leaks from the tanks or the piping. It is unclear at this time how much contaminated soil has been and will be generated from these tanks.

Asbestos-Containing Wastes. No estimates are available at this time. The County is not involved in the monitoring or permitting of asbestos removal/remediation work.

In recent years, local concerns have been raised concerning the potential threat of serpentine road base containing asbestos. The State of California Air Resources Board produced a Proposed Control Measure for Asbestos Containing Serpentine Rock in Surfacing Applications. The EDC Air Pollution Control District is in the process of drafting a regulation which, if approved, will limit the use of serpentine used for surfacing to that which contains less than five percent asbestos.

Summary of Clean-Up Wastes. Generation of wastes during clean-up activities is considered a unique occurrence and not part of the continuous waste stream or "planning estimate." None of the contaminated sites in El Dorado County have been sufficiently characterized to project the amount of contaminated wastes that will be generated.

Other Wastes

No pre-treatment sludge, designated or special waste, or new waste streams are anticipated in El Dorado County in the near future. Renewed mining activity, residue from sawdust burning at timber mills, or other new industrial activities could generate additional wastes in the future. The CHWMP data information system would be updated if new generators come on line.

Improper Illegal Disposal

In 1990, approximately 20 percent of El Dorado County's estimated hazardous waste was manifested. This does not include a large volume of waste oil, solvents, and other waste types from El Dorado County manifested by out-of-County waste collection services. Therefore, proper disposal of small business and industry hazardous waste is estimated to be 80 to 90 percent. With implementation of the hazardous waste collection events, education, technical assistance, inspection and monitoring programs, improper disposal should continue to decrease. Monitoring of solid waste and sewage wastes will also help to identify and minimize illegal disposal.

The highest percentage of improper disposal may occur at the household level. The hazardous waste collection events are now for the first time providing the public with a practical method of disposal.

County Programs

The State government consults with the local agencies to ensure regulatory consistency Statewide and to provide resources that would not otherwise be available to the County. The primary State agencies with jurisdiction over hazardous materials and waste are the Regional Water Quality Control Boards (RWQCBs) and the Department of Toxic Substances Control (DTSC). Other State agencies involved in toxics include the Department of Fish and Game, Department of Food and Agriculture, Department of Industrial Relations, State Office of Emergency Services, Air Resources Board, Department of Transportation, and the Solid Waste Management Board.

In El Dorado County, the agencies and their current hazardous waste/materials management responsibility include:

Agency	Program
Environmental Management Department	Improper/illegal handling and disposal Underground tanks Contaminated sites Water quality (including Proposition 65) CHWMP coordination Hazardous material inventory/disclosure Emergency response and planning Air emissions
Local Fire Districts	Some of the 13 districts inspect and regulate hazardous materials storage Assist Environmental Management with emergency response
Law Enforcement	Emergency response (incident commander)
Planning Department	Facility siting and CEQA CHWMP coordination
Agricultural Commission	Pre-use registration and granting of permits for use of pesticides

AIR QUALITY

Climate and Meteorology

The Foothills Region is a transition zone between the climate of the Central Valley and that of the Sierra Nevada Mountains. Elevations in El Dorado County increase at a gradual and nearly uniform rate and range from a low of 200 feet at its border with Sacramento County to a high of 10,881 feet atop Freel Peak in the Lake Tahoe Basin. Two other mountain peaks in the Lake Tahoe area exceed 10,000 feet: Monument Peak at 10,067 feet and Job's Sister at 10,823 feet.

Temperature and snowfall patterns are associated with El Dorado County's increases in elevation. The western portion of the County adjacent to Sacramento County is generally warmer year round than the Lake Tahoe Basin. The extreme western portion of the County is likely to experience summer temperatures in excess of 100°F whereas, during the same period, it is not uncommon for the Lake Tahoe Basin to experience near freezing temperatures at night and temperatures in the 80s F. during the day.

Precipitation, while correlated to increases in elevation, is influenced more by the orientation of the Sierra Nevada terrain to an incoming storm than any other factors. At the County's extreme western border, an average annual rainfall of 30 inches can be expected. In the central part of the County, in the area of the Crystal Basin Range, 70 plus inches is the norm. The eastern portion of the Sierras, overlooking the Lake Tahoe Basin, experiences rainfall of 30 inches per annum. Annual average snow depths are 20 inches at the 3,500 foot elevation in the west, increasing to 250 inches in the Crystal Basin area, and to 300 inches in the Lake Tahoe Basin.

Wind currents change seasonally, but most winds on the Western Slope of El Dorado County are from the west and southwest. During the summer, morning winds from the west increase in frequency reflecting the increased presence of the seabreeze intrusion and upslope valley flows (El Dorado County APCD, 1978). During the winter months, winds are from the south or southeast. Windspeeds generally tend to increase with elevation, and terrain influences on windspeed can be substantial. Santa Ana-type winds originate from the Great Basin, west of the County, during winter and spring months (Kazama, 1980).

Air Pollution

Air pollution is any air contaminant present in the atmosphere in sufficient quantities to be injurious to public welfare, human health, plant or animal life, or property. A description of major pollutants and their effects is presented in Table 6-7.

TABLE 6-7
AIR POLLUTANT DESCRIPTIONS AND EFFECTS

Pollutant	Definition	Source	Associated Damage
Suspended Particulate	Solid and liquid particulates of soot, dust, aerosols, and fumes ranging from 0.01 to 100 microns and averaging about 2 microns in size (1 micron = 1/2540")	Combustion sources, cars, industry process losses, fugitive dust, field and slash burning, and natural sources, such as ocean spray and wind-raised dust	Aggravates chronic lung disease, heart and lung disease symptoms; causes material damage and visibility reduction
Sulfur Dioxide	A colorless, pungent, irritating gas	Oil and coal combustion and industry process losses	Aggravates asthma, heart, and lung disease in the elderly; irritates lungs, corrosive to metals and marble; causes plant damage
Carbon Monoxide	A colorless, odorless gas that is highly toxic	Incomplete combustion sources, mostly cars	Interferes with the blood's ability to carry oxygen, causing heart difficulties in those with chronic diseases; reduces lung capacity; impairs mental abilities
Photochemical Oxidants	Mostly consists of ozone, which is a toxic gas	Photochemical processes in the atmosphere by reaction between oxides of nitrogen and hydrocarbons in the presence of sunlight	Irritates eyes, causes damage to lung tissue and impairs lung functions; causes material and plant damage
Nitrogen Dioxide	A reddish-brown gas, toxic in high concentrations	Conversion of nitric oxide (from autos and combustion sources) and industrial sources	Increases chronic bronchitis and irritates lungs
Hydrocarbons	A large family of compounds consisting of hydrogen and carbon	Autos, evaporative fuel losses, industry and combustion processes Participate in oxidant formation and causes plant damage (methane is produced naturally by decay of organic matter and is not significant in oxidant formation)	

Source:

Regulatory Framework

The passage of the Federal Air Quality Act of 1967, subsequently known as the Clean Air Act, provided the first national program to control pollution from automobiles and stationary sources. Federal air quality standards established by the Act (National Ambient Air Quality Standards) are classified as either primary which seek to protect human health or secondary which are designed to protect not only human health but property, the appearance of the air, and resources such as soil, crops, wildlife, and vegetation.

California began setting air quality standards in 1969 with the passage of the Mulford-Carrell Act. California employs more stringent regulations than the Federal government for vehicle emissions under a program administered by the California Air Resources Board. The State and National ambient air quality standards are shown in Table 6-8. The Lake Tahoe Air Basin has specific standards established by the TRPA which are established by the TRPA Regional Plan for the Lake Tahoe Basin.

California standards, other than carbon monoxide, sulfur dioxide (one hour), nitrogen dioxide and particulate matter ten microns in size or less (PM10) are values that are not to be equaled or exceeded. The carbon monoxide, sulfur dioxide (one hour), nitrogen dioxide, and particulate matter (PM10) standards are not to be exceeded. California also has standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles.

National standards, other than ozone and those based on annual averages or annual geometric means, are not to be exceeded more than once a year. The ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standard is equal or less than one.

Congress amended the Clean Air Act in 1977 to require the identification of areas that did not meet the National Ambient Air Quality Standard (NAAQS). A non-attainment plan, showing how the standards would be met by 1982, was required for each area failing to meet the standard. Because some areas in California were not going to be able to attain the standards by 1982, the State was granted an extension to 1987. This deadline has been extended. The California Clean Air Act, effective January 1989, imposes additional air quality standards as well, including annual reductions in emissions of five percent.

The State of California has been divided into fourteen air basins for the purposes of monitoring air quality standards. The West Slope of El Dorado County is located in the Mountain Counties Air Basin which is shared by the nine other foothill counties. The East Slope of the County is located within the Tahoe Air Basin. Within El Dorado County, the primary responsibility for air pollution monitoring and control lies with the El Dorado County Air Pollution Control District which is considered part of the "Broader Sacramento Area" for nonattainment status and planning. The El Dorado County Air Pollution Control District is directed by the El Dorado County Air Pollution Control Board which is composed of members of the Board of Supervisors.

**TABLE 6-8
AMBIENT AIR QUALITY STANDARDS**

California		National	
Air Pollutant	Concentration ^a	Primary(>)	Secondary(>)
Ozone	0.09 ppm, 1-hr. avg.	0.12 ppm, 1-hr. avg.	0.12 ppm, 1-hr. avg.
Carbon Monoxide	9.0 ppm, 8-hr. avg. 20 ppm, 1-hr. avg.	9.5 ppm, 8-hr. avg. 35 ppm, 1-hr. avg.	9.5 ppm, 8-hr. avg. 35 ppm, 1-hr. avg.
Nitrogen Dioxide	0.25 ppm, 1-hr. avg.	0.053 ppm, annual avg.	0.053 ppm, annual avg.
Sulfur Dioxide	0.05 ppm, 24-hr. avg. ^c	0.03 ppm, annual avg. 0.14 ppm, 24-hr. avg.	0.50 ppm, 3-hr. avg.
Suspended Particulate Matter (PM 10)	30 ug/m ³ annual geometric mean 50 ug/m ³ , 24-hr. avg.	50 ug/m ³ , annual f) arithmetic mean 150 ug/m ³ , 24-hr. avg.	50 ug/m ³ , annual f) arithmetic mean 150 ug/m ³ , 24-hr. avg.
Sulfates	25 ug/m ³ , 24-hr. avg.		
Lead	1.5 ug/m ³ , 30-day avg.	1.5 ug/m ³ , calendar quarter	1.5 ug/m ³ , calendar quarter
Hydrogen Sulfide	0.03 ppm, 1-hr. avg.		
Vinyl Sulfide	0.010 ppm, 24-hr. avg.		
Visibility Reducing Particulates	In sufficient amount to reduce the prevailing visibility to less than 10 miles at relative humidity less than 70%, 1 obs.		

- a) California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour), nitrogen dioxide, suspended particulate matter-PM₁₀, visibility reducing particulates, are values that are not to be exceeded. The sulfur dioxide (24-hour), sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride standards are not to be equaled or exceeded.
- b) National standards, other than ozone and those based on annual averages or annual arithmetic means, are not to exceed more than once a year. The ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standard is equal to or less than one.
- c) At locations where the State standards for ozone and/or total suspended particulate matter are violated. National standards apply elsewhere.

Note: ppm = parts per million by volume.
ug/m = micrograms per cubic meter.

Air Quality in El Dorado County

Stationary Sources. Stationary sources are fixed sources which emit air pollutants. In El Dorado County, stationary sources include: residential wood combustion, industrial boilers, residential space and water heating, fuel production and transfer, formulation and application of paints, solvents, and other coatings, organic waste disposal, dry cleaning operations, soil decontamination, wastewater processing, and graphic arts processes.

Area Sources. Area sources include all sources of air pollution other than mobile sources (i.e., autos and trucks) and stationary sources. Some area sources in El Dorado County may include refuse burning, wild fires, service station operations, use of non-synthetic pesticides, paved and unpaved road dust, construction (and demolition) of buildings, farm equipment operation, construction equipment operation, utility equipment, range improvement, and forest management. The primary forest management practice affecting air quality is burning of logging slash and forest underburning for fuel reduction. Prescribed fire is the most common and usually most economical way to dispose of unwanted concentrations of fuel (U.S. Forest Service, 1988).

Mobile Sources. Mobile sources include cars, trucks, busses, automobiles, and other vehicles. Motor vehicle emissions are responsible for more than half of California's air pollution and are the primary source of pollution within the County. In El Dorado County, vehicular pollutants are carried in from the urbanized areas of Sacramento County and the San Francisco Bay Area by prevailing wind patterns. Vehicular traffic along U.S. Highway 50 between Sacramento and South Lake Tahoe is also a significant contributor of contaminants.

Local Air Quality Monitoring. The primary responsibility for monitoring and controlling air pollution in the County lies with the El Dorado County Air Pollution Control District. Currently, the Air Pollution Control District is considered part of the "Broader Sacramento Area" for nonattainment status and planning. El Dorado County is classified by Federal and State standards as "serious non-attainment" for ozone. An ozone monitoring study in 1989 documented 82 hours of violations over a 21 day period. Modeling has demonstrated that El Dorado County contributed 40 percent to the ozone violations. The remainder is transported from the Sacramento Valley via winds. The County is also in non-attainment for State particulate matter (PM10) standards.

As of 1993, there are no longer operating air monitoring stations in El Dorado County. The Air Pollution Control District previously maintained an air monitoring station in Placerville which only monitored for PM10. The results of monitoring at this station show exceedances of State suspended particulate (PM10) standards. A monitoring station for carbon monoxide was also located within El Dorado County at Ponderosa High School in Shingle Springs. No exceedances of State or Federal CO standards occurred at this station. Since ozone monitoring has not occurred in El Dorado County, ozone concentrations from a monitoring station in Folsom are used to characterize ozone levels within the County. This monitoring station is upwind from the County and is the best available indicator of ozone trends. El Dorado County is a non-attainment area for national ozone standards. The County is unclassified for carbon monoxide.

This carbon monoxide designation is primarily because El Dorado County is considered "rural" and is heavily impacted by the transport of pollution produced in the Sacramento and San Francisco Metropolitan areas. A summary of pollutant monitoring results within the County is contained in Table 6-9.

TABLE 6-9
SUMMARY OF ANNUAL AIR QUALITY MONITORING DATA

	1986	1987	1988	1989	1990	1991	1992
<i>Folsom</i>							
Ozone (O3)							
State Standard (1-hr. av., 0.09 ppm)							
Federal Standard (1-hr. avg., 0.12 ppm)							
Maximum Concentration	0.15	0.16	0.17	0.17	1.11	0.19	0.15
Number of Days State Standard Exceeded	36	52	61	48	3	—	n/a
Number of Days Federal Standard Exceeded	7	17	19	8	0	—	n/a
Nitrogen Dioxide (NO2)							
State Standard (1-hr., avg., 0.25 ppm)							
Federal Standard (0.534 AAM in ppm)							
Maximum 1-hr. Concentration	NM	NM	0.10	0.09	0.10		
Number of Days State Standard Exceeded	—	—	0	0	0		
Percent Federal Standard Exceeded	—	—	0	0	0		
<i>Ponderosa High School</i>							
Carbon Monoxide (CO)						n/a	n/a
State Standard (1-hr/8-hr. avg., 20/9 ppm)							
Federal Standard (1-hr./8-hr. avg., 35/9.5 ppm)							
Maximum Concentration (1-hr./8-hr. period ppm)	NM	NM	NM	6/4.6	5/3.5		
Number of Days State 1-hr./8-hr. Standard Exceeded	—	—	—	0/0	0/0		
Number of Days Federal 1-hr./8-hr. Standard Exceeded	—	—	—	0/0	0/0		
<i>Placerville</i>							
Suspended Particulated (PM10)*							
State Standard (24-hr. avg., 50 ug/m ³)							
Federal Standard (24-hr. avg., 150 ug/m ³)							
Maximum 24-hr. Concentration	37	50	56	59	89		
Percent Samples Exceeding State 24-hr. Standard	0	0	.04	.07	.08		
Percent Samples Exceeding Federal 24-hr. Standard	0	0	0	0	0		
<p>*Data presented are valid, but incomplete in that an insufficient number of valid data points were collected to meet EPA and/or ARB criteria for representative.</p> <p>Source: California Air Resources Board, Air Quality Data 1986 through 1990</p>							

As a part of the Clean Air Act, local air pollution control districts in violation of air quality standards are required to prepare plans to bring their jurisdictions into compliance with air quality standards. The California Air Resources Board will review and approve the plans and will coordinate the Statewide pollution reduction effort. The El Dorado County Air Pollution Control District Board has adopted a California Clean Air Act Plan (May 1993) which sets forth a program for controlling and reducing emissions in the County. The policies and programs for air quality contained within this General Plan are intended to implement the California Clean Air Act Plan.

AIRPORT SAFETY

El Dorado County has four public airports, three of which are used for general aviation purposes and one which has limited commercial service. As with all airports--large or small, commercial, general, or military--safety is a priority. El Dorado County recognizes that takeoffs and landings are the most critical phases of flight; and precautions should be developed, adopted, and implemented to ensure the safety of airplane passengers and persons working and/or living near the County's airports.

Placerville, Georgetown, Cameron Airpark, and South Lake Tahoe are the four public airports in El Dorado County. Three of these airports exist in the Western Slope of El Dorado County: Placerville, Georgetown, and Cameron Park. These are all used for general aviation purposes. The South Lake Tahoe Airport, located in the Tahoe Basin, has limited scheduled commercial airline service. A number of additional private airports and heliports exist, but they are not open to the general public.

Since 1968, an airport land use commission (ALUC) has been required in California counties which contain one or more public use airports. In accordance with Article 3.5 of the California Public Utilities Code, the Sierra Planning Organization has been designated the Airport Land Use Commission for the counties of El Dorado, Placer, and Nevada; and the City of South Lake Tahoe Planning Commission has been designated the ALUC for the City of South Lake Tahoe. Each ALUC is required to establish planning boundaries around each public use airport within its jurisdiction and to formulate a comprehensive land use plan (CLUP) to provide for the sensible growth of the airport and the surrounding airport environs. Additionally, State law requires all general plans to be consistent with applicable airport land use plans.

The Federal Aviation Administration (FAA) establishes airspace standards which provide for the navigation of aircraft in the vicinity of airports. FAA standards are based on a complex geometry of airspace requirements. Among other topics, these standards control building height within the vicinity of airports to provide adequate airspace for the movement of aircraft, ensure the safety of people on the ground in the vicinity of airports, and preserve the safety and utility of airports.

Airport Safety Factors

The most significant factor affecting airport safety, beyond normal airplane maintenance and airport operations, is the location and nature of land uses surrounding airports. This includes the building sizes and facade materials. Additionally, a number of related factors may interfere with aircraft operations such as reflection, lights, electronic equipment, smoke emission, birds, and the use or storage of highly toxic or hazardous materials.

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Chapter 7

CONSERVATION AND OPEN SPACE

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Chapter 7

CONSERVATION AND OPEN SPACE

GEOLOGY AND SOILS

El Dorado County elevations increase at a gradual rate, ranging from a low of 200 feet at the Sacramento County border to a high of 10,881 feet atop Freel Peak in the Lake Tahoe Basin. The southwestern foothills, with elevations of less than 1,000, feet are composed of rocks of the Mesozoic Era Mariposa formation. The major groups of the Mariposa formation found in these areas are amphibolite, serpentine, and pyroxenite. In the northwestern parts of the County, an abundance of metamorphics of the Calaveras Formation (Paleozoic Era) consisting of chert, slate, quartzite, and mica schist are found. Serpentine formations of limited extent are also found in this area. At the higher peaks, the surface geology in El Dorado County is primarily igneous and metamorphic. Granite has intruded into these great masses and comprise the parent material of much of the soils at the higher elevations.

Soils Classifications

A detailed survey of soil types on the Western Slope and their suitability for agricultural production and other land uses was published in 1974. The study, entitled *Soil Survey of El Dorado Area, California*, was conducted by the United States Department of Agriculture Soil Conservation Service (SCS) and Forest Service in cooperation with the University of California Agriculture Experiment Station. It is one of the most thorough examinations of soil characteristics conducted in the County. The Soil Conservation Service also conducted a study of the soil types of the Lake Tahoe Basin (Soil Survey, Tahoe Basin Area, California and Nevada, 1974).

The County soils consist of well-drained sandy and gravelly loams associated in the lower elevations with grass, oak, and brush, and in the higher elevations with coniferous and hardwood forests. Dominant soils outside of the Lake Tahoe Basin are the Auburn-Argonaut and Mariposa-Josephine-Sites Associations. These soil associations account for 25 percent and 30 percent of the Western Slope, respectively.

The "capability system" is commonly used to denote suitability and limitations of soil groups for agricultural and other types of land uses. Focusing on agricultural uses, Class I soils are best suited to the widest range of production and cultivation. Soil classifications range from Class I to Class VIII with soils being progressively less suited for agricultural uses the higher the classification. There are no Class I soils in El Dorado County. All soils in the County are rated as having some limitations for agricultural productivity. In addition, subclasses further describe

the soil constraints with respect to erosion potential, drainage concerns, and depth. In general, the Western Slope of the County has agricultural limitations that result primarily from steep slopes, insufficient depth to bedrock, coarse fragments in the soil profile, low available water holding capacity, and rock outcrops (USDA, SCS, 1974).

The Lake Tahoe Basin is composed of ten soil associations that, due to their similarities, have been broken into three broad groups: (1) those that are "nearly level to gently sloping soils along streams, or fans, and in meadows;" (2) those that are "nearly level to steep soils on moraines, glacial outwash terraces, and alluvial fans;" and (3) those that are "gently sloping to very steep soils of the mountains." The Tahoe Regional Planning Agency uses a land capability system to regulate land development activities (see Individual Parcel Evaluation System, Chapter 11). This system allocates a level of capability from one to seven for a piece of land to be developed based on its soil type, slope, and hydrologic characteristics.

Nearly 65 percent of the land within the boundaries of El Dorado County possess slopes exceeding 25 percent. The areas most likely to experience erosion are those with slopes greater than 20 percent, particularly if natural vegetation has been removed or burned away. Off-site impacts may include increased sedimentation in streams, rivers, and reservoirs and subsequent degradation of water quality, damage to sensitive fisheries, downstream flooding, and mudslides.

EXTRACTIVE RESOURCES

Extractive resources, generally found below the earth's surface, are usually mineral derivatives but may also include geothermal and natural gas deposits. It may take millions of years for geologic processes to replenish the resource following extraction; consequently, they are typically considered to be "non-renewable" resources.

El Dorado County is considered a wealthy mining region capable of producing a wide variety of mineral resources. Both the United States Geological Survey and the California Division of Mines and Geology (CDMG) have evaluated the potential locations and production capacity of various types of extractive resources throughout the County. Metallic mineral deposits, gold in particular, are considered the County's most significant extractive mineral resource. Other metallic minerals found in the County include silver, copper, nickel, chromite, zinc, tungsten, mercury, titanium, platinum, and iron. Non-metallic mineral resources include building stone, limestone, slate, clay, marble, soapstone, sand, and gravel (CDMG, 1984). The County's Exploration and Mining Activity map shows the locations of 26 reclamation sites. The largest sites are Marble Valley in the southwest portion of the County, Cool Cave Valley Limestone in the northwestern portion of the County, and Hazel Creek Mine and Plum Creek Quarry, both in central El Dorado County.

Mineral Resource Management

Mining activities are subject to local, State, and Federal policies and regulations. In 1985 and 1986, resolutions were enacted by the State Mining and Geology Board. These resolutions clarified aspects of the Surface Mining and Reclamation Act (SMARA) enacted in 1975 by the State legislature to regulate activities related to mineral resource extraction. SMARA requires the prevention of adverse environmental effects caused by mining, requires the reclamation of mined lands for alternative land uses, and requires the elimination of public health and safety hazards due to the effects of mining activities. At the same time, SMARA encourages both the conservation and production of extractive mineral resources requiring the State Geologist to identify and attach levels of significance to the State's varied extractive resource deposits.

Permits to mine or explore for mineral resources are issued by the County following approval of the applicant's completed Exploration and Mining Packet. The packet consists of a Special use permit application, requirements for a reclamation plan and an environmental review form. If all environmental, social, and land use concerns are satisfied, the parties wishing to operate the mine facility may conduct tests to explore its economic feasibility. The requirements included in the mining packet serve to comply with the SMARA resolutions established by the State legislature.

Federal law allows the U.S. Forest Service, through the Eldorado National Forest Land Use and Resource Management Plan, to impose conditions on mineral rights leases (U.S. Forest Service, 1988). The USFS has the responsibility to protect all surface resources. Public health and safety issues are primary responsibilities of the State and the County within the National forests and Federal lands as well as on private lands. Such protection may affect mineral extraction feasibility by inhibiting road and utility access, disposal of waste materials, site processing, and other extraction necessities. Surface resource protection is implemented through mitigation and reclamation measures in required operating plans.

The County is negotiating a Memorandum of Understanding (MOU) with the U.S Forest Service regarding the division of responsibilities when mining takes place on Forest Service lands and on private lands within the National Forest. The County will review all reclamation plans to ensure their compliance with SMARA.

Mineral Classification System

The CDMG has established a classification system to denote both location and significance of key extractive resources (CDMG, 1984). In addition, a superscript lower case letter describes the geologic nature of the deposit. An explanation of the Mineral Resource Zone (MRZ) classification system is presented in Table 7-1. Mineral land classification maps for the Placerville and Georgetown Quadrangles, which comprise much of the western half of the County, indicate that the key extractive mineral resources may be found within these quadrangles. Additionally, resources of regional significance have also been mapped by the CDMG. These classification maps are available for review at the County Planning Department.

TABLE 7-1
MINERAL RESOURCE AND SCIENTIFIC ZONES

In order to communicate mineral resource information for mineral land classification, the categories set forth in the guidelines established by the State Mining and Geology Board have been adapted to the California Mineral Land Classification Diagram. These general adaptations are presented below:

MRZ-1	Areas where available geologic information indicates that there is little likelihood for the presence of mineral resources.
MRZ-2a	Areas underlain by mineral deposits where geologic data indicate that significant measured or indicated resources are present. Areas classified MRZ-2a contain discovered mineral deposits that represent either measured or indicated reserves as determined by such evidence as drilling records, sample analyses, surface exposure, and mine information. Land included in the MRZ-2a category is of prime importance because it contains known economic mineral deposits.
MRZ-2b	Areas underlain by mineral deposits where geologic information indicates that significant inferred resources are present. Areas classified MRZ-2b contain discovered mineral deposits that represent either economic inferred resources as determined by limited sample analyses, exposure, and past mining history. Further exploration work and/or changes in technology or economics could result in upgrading areas classified MRZ-2b to MRZ-2a. The MRZ-2b designation is applied to areas where geologic evidence indicates there is a high likelihood that economic concentration of minerals area present.
MRZ-3a	Areas underlain by geologic settings within which undiscovered mineral resources similar to known deposits in the same producing district or region may be reasonably expected to exist (hypothetical resources). Lands classified MRZ-3a represent areas in geologic setting which are favorable environments for the occurrence of specific mineral deposits. In the classification diagram, these lands are referred to as hypothetical resources. Further exploration work within these areas could result in the reclassification of specific locations into the MRZ-2a or MRZ-2b categories. MRZ-3a areas are considered to have a moderate to high potential for the discovery of economic mineral deposits.
MRZ-3b	Areas that may contain undiscovered mineral resources that occur either in known types of deposits in favorable geologic settings where mineral discoveries have not been made or in types of deposits as yet unrecognized for their economic potential. Lands classified MRZ-3b represent areas in geologic settings which appear to be favorable environments for the occurrence of specific mineral deposits. In the California Mineral Land Classification diagram, these are referred to as speculative resources. Further exploration work could result in the reclassification of all or part of these areas into the MRZ-3a category or specific localities into the MRZ-2a or MRZ-2b categories. MRZ-3b is applied to lands where geologic evidence leads to the conclusion that it is plausible for economic mineral deposits to be present.

TABLE 7-1
MINERAL RESOURCE AND SCIENTIFIC ZONES

MRZ-4	Areas where geologic information does not rule out either the presence or absence of mineral resources. MRZ-4 is commonly applied to areas of unknown mineral resources that occur within a broader favorable terrain known to host economic mineral deposits. It must be emphasized that MRZ-4 does not imply a low likelihood for the presence of mineral resources. Exploration work and development of new concepts in economic geology could result in the reclassification of areas assigned MRZ-4 to the MRZ-3 and MRZ-2 categories.
Source: California Department of Conservation, 1984; <i>Mineral Land Classification of the Auburn 15' Quadrangle, El Dorado and Placer Counties, California</i> , Open-File Report 83-37, Division of Mines and Geology.	

Types of Extractive Resources

Metallic Resources. Since the discovery of gold in El Dorado County, gold remains the most significant extractive resource County-wide. The presence of metallic or non-metallic mining resources depends largely on the geologic make-up of the subsurface rock. Metallic resources such as gold, silver, copper, and zinc are formed by volcanogenic processes that lead to both polymetallic massive sulfide deposits and disseminated sulfide deposits. The former deposit type generally yields a higher percentage of copper and zinc while the latter types of deposits characteristically produce greater amounts of gold.

Another widespread geologic condition, known as placer deposits, produces metallic resource deposits, particularly gold and platinum-group elements, such as chromite. Metallic minerals such as gold are sufficiently dense to be weather resistant and able to withstand the wave or current action that contributed to creation of the placer deposits (CDMG, 1987).

Gold. Gold was first reported as a key mining resource following James Marshall's discovery at Coloma, El Dorado County, in 1848. Gold in the Sierra Nevada foothills was soon being extracted from mines and river channels. High volumes of gold were recovered throughout the century (CDMG, 1987).

There were three methods of mining used at this time: placer, hydraulic, and hardrock. Placer mining consisted of sifting through river or stream deposits for loose nuggets or flakes. This was usually done with a pan; however, large devices called "sluiceboxes", operated by many men, were also used. Hydraulic mining involved the use of large water cannons called "monitors" to literally wash away entire hillsides. The resulting mud would be directed through sluiceboxes to separate the gold. Hardrock mining requires digging into the earth in pursuit of veins of gold or gold-bearing ore.

One of the most productive lode mines in the County was the Big Canyon Mine located near Latrobe. The Big Canyon Mine, also known as Oro Fino, was discovered in the 1880s.

Between 1893 to 1901 and 1934 to 1940, it produced more than \$3 million in gold. Details concerning the Big Canyon Mine, as well as the Vandalia mine located nearby, are described in *Geology and Geochemistry of Gold Deposits of the Big Canyon Area, El Dorado County, California*, United States Geological Survey Bulletin #1854 (1988). In addition, the Alabama and Chicago Mines in the Penryn District were formerly large producing gold mines. The Zantgraf Mine near Folsom Lake produced \$1 million in gold up to 1901. Native gold was the principal mineral mined in the Ophir mining district, while silver, lead, copper, and zinc were often by-products. The estimated value from the Ophir district was \$15 million dollars. Notable production in this area in the future is questionable (CDMG, 1987).

Despite the years of mining activity, gold and other metallic resources are not considered to be exhausted in El Dorado County. Some mining operations are still active such as the Blue Gouge Gold Mine near Sly park. Several gold mines in the Georgetown vicinity, such as the Cassil Mine, the Shumway project, the Alhambra-Atlantic Project, the Yellow Jacket Mine, and the Trail Mine are now or soon may be active. Several quarries producing industrial mineral resources are also active (U.S. Forest Service, 1988).

Silver. Silver produced to date has been a by-product of gold and base-metal mining. In the Eldorado National Forest, the Hazel Creek Mine has produced a considerable quantity of silver on patented land. The success of this mine is significant to the forest since its location and mineralized environment indicates similar deposits could occur on nearby national forest lands (U.S. Forest Service, 1988).

Copper and Zinc. Throughout the foothills of the Sierras, there were 20 notable mines that produced 200 million pounds of copper and 50 million pounds of zinc. The mines operated during the Civil War, World Wars I and II, but have been inactive since 1940. The Pioneer and Lilyama Copper Mines, located in southwest El Dorado County, were two notable mines. Copper was mined at the Cosumnes Copper Mine as late as the 1950s. The mine was located near the community of Fairplay. Copper and zinc mineralization occurs along the western boundary of the Eldorado National Forest, but exploration of the areas has been limited (U.S. Forest Service, 1988).

Chromite. The Flagstaff Hill mining district is the largest known area of chromite production in El Dorado County. The area was mined from 1892 to 1918 and intermittently from the mid-1930s to 1955. Since 1955, no mining is known to have taken place. The Flagstaff Hill chromite mine is classified as MRZ-2b^(m) indicating the deposit is a magmatic derivative. Many of these deposits were too small or low grade to be mined profitably yet several have yielded appreciable quantities of low-grade ore and some massive ores. The Pillikin Mine, the largest producing mine in the Flagstaff District (now inactive), is estimated to have produced 200,400,000 tons of dunite containing five percent chromite (CDMG, 1987). Other areas, including Pilot Hill and several bars along the Middle Fork of the American River (now inundated by Folsom Lake), were mined for chromite and gold as well. Other chromite-bearing areas have been found within the Eldorado National Forest, east of Georgetown and southeast of Placerville (U.S. Forest Service).

Tungsten. Several thousand dollars worth of tungsten ore was mined in the Eldorado National Forest in 1983 from the Comback Consolidated Mine. Two other forest deposits of tungsten include the Grizzly Flat deposit and the Williams prospect. While most of the known resources in El Dorado County are of a low grade, they could become essential in the future (U.S. Forest Service).

Non-Metallic Mineral Resources

Deposits of rock, limestone, talc, and asbestos, among others, are industrial minerals. Industrial mineral deposits are formed by diverse geologic processes more difficult to classify than metallic minerals.

Limestone. Limestone deposits form in relatively shallow marine and lake environments. Limestone is widely used by the construction, agriculture, metallurgical, chemical, sugar refining, paint, and glass manufacturing, and cement industries. By far, the greatest amount of limestone goes into production of cement. A large active limestone quarry is located north the community of Cool along State Route 49. The quarry was mined as early as 1880. Currently, the high-calcium limestone extracted near Cool is primarily used in sugar refining. This quarry and the larger deposit with which it is associated is classified as a MRZ-2a^(i-d) for limestone by the CDMG. The Cool Cave limestone deposit would be partly inundated should the proposed Auburn Dam be completed (CDMG, 1987).

CDMG has identified an additional significant limestone quarry in the nearby Pilot Hill area. This area, classified as MRZ-2a^(i-d) for limestone, has been mined since the 1860s and much of the readily accessible resource has been removed. The limestone here is of more variable chemical composition than that of the Cool deposit, containing dolomite or silica, as well as calcium.

Talc. Talc is a magnesium-rich silicate mineral used mainly as a filler-type additive by the paint, paper, ceramic, cosmetic, plastics, roofing, petroleum, rubber, and chemical industries. Several talc deposits have been mined in the southwest portion of the County (CDMG, 1987).

Asbestos. Asbestos is a term applied to several naturally occurring fibrous materials that are used in manufactured goods because of their fibrous and heat-resistant characteristics. Asbestos has been mined in several localities throughout the Sierra Nevada including the northwest portion of the County (CDMG, 1987).

WATER RESOURCES

Water resources in El Dorado County include rivers, streams, lakes, groundwater, and wetlands. Domestic water in the County comes from surface water systems and to a lesser degree from fractured-rock groundwater sources. Two distinct drainage basins occur within the County: the Central California Basin draining to the Pacific Ocean (on the West Slope) and the Tahoe or Lahontan Basin draining to the saline lakes of the Nevada high desert (Great Basin). A rapidly expanding local regional and Statewide population is increasing pressure on natural waterways

for consumptive and non-consumptive uses. This threatens the quality of riparian corridors and the integrity of watershed systems and places an increasing demand on the supply of potable water for domestic use. This section focuses on the quality, quantity, and varied uses of the County's water resources. The public services section provides a discussion of domestic use facilities and factors affecting water development.

Precipitation

Average annual rainfall ranges from 30 inches at the western border to 70 inches or more in the central part of the County. Annual average snow depths increase from west to east and range from 20 to 300 inches.

Major Watersheds and Surface Waters

El Dorado County has four major watersheds drained by the Middle Fork of the American River (Central Basin Plan Sub-Area 5-A), the South Fork of the American River (Central Basin Plan Sub-Area 5-A), the Cosumnes River (Central Basin Plan Sub-Area 5-B), and the tributaries to the Lake Tahoe Basin. The major rivers running through the County are the American, Cosumnes, and Upper Truckee rivers, each with numerous major and minor tributaries. (Note: the North Fork of the American River forms the boundary between El Dorado and Placer Counties for ten miles below the confluence with the Middle Fork to Folsom Lake. The drainage contribution within the County could be considered insignificant.

Middle Fork American River. The Middle Fork watershed includes surface waters of the Rubicon River, Loon Lake, Lake Edson, Gerle Creek and Reservoir, Stumpy Meadows Reservoir, and Rubicon Reservoir. This river generally forms the northern boundary of the County.

South Fork American River. The South Fork is the largest of the four watersheds within the County and extends from the Sacramento County line in the west through the north-central section of the County east to the western edge of the Tahoe Basin and then generally south to the Alpine and Amador County lines. The upper portions of the Silver Fork of the American River above Caples Lake and Silver Lake are in Alpine County and Amador County, respectively. Surface waters of the South Fork watershed include the South Fork of the American River, Lake Aloha, Ice House Reservoir, Union Valley Reservoir, Wright's Lake, Slab Creek Reservoir, Junction Reservoir, Chili Bar Reservoir, Folsom Lake, Caples Lake, Silver Lake, Medley Lakes, and minor diversions from the Tahoe Basin at Echo Lake.

Cosumnes River. The Cosumnes River watershed is in the southern portion of the County; and because of limited size and relatively low elevation, many of its streams do not run throughout the year (El Dorado County, 1984). Included within this watershed area are Jenkinson Lake, Camp Creek, Weber Creek, Bass Lake, Deer Creek, and the North, Steely, Middle and South Forks of the Cosumnes River as well as various other smaller tributaries.

Lake Tahoe Basin/Upper Truckee River. The Lake Tahoe Basin is located at the crest of the Crystal Range of the Sierra Nevada and, unlike the other watersheds in the County, drains east to the high desert of the Great Basin, not the Pacific Ocean. The Upper Truckee River begins in Alpine County and drains Lake Valley, the Echo Lake Basin via Echo Creek, and Angora Lakes via Angora Creek and terminates at Lake Tahoe in a marsh system shared with Trout Creek. Other tributaries to Lake Tahoe drain the Desolation Wilderness high country via numerous streams in what is called the Emerald Bay hydrologic unit. The outlet of Lake Tahoe at Tahoe City marks the beginning of the Truckee River, which flows north to Truckee, east through Reno, terminating at Pyramid Lake.

Groundwater

There are 357 groundwater basins in California, but no designated basins are identified in the County. There are, however, many wells in the foothills of the Sierras and elsewhere outside the groundwater basins identified by the State Department of Water Resources (DWR). These wells usually draw from small openings along rock fractures (DWR, 1988; U.S. Forest Service, 1988). The rock mass itself is relatively impermeable, and even the highly weathered material at the surface has very low permeability. Usually the major water-bearing fractures are nearly vertical while other fractures occur in flat to moderately steep angles. In these areas, groundwater is available on a limited basis and is of relatively high quality (U.S. Forest Service, 1988). It has been used for the development, of permanent and recreational homesites, campgrounds, some agricultural and livestock development and wildlife uses. The increase in population has in some cases resulted in decreased well water production levels and reduced availability of local groundwater in rock fractures (DWR, 1988).

Specific conclusions about groundwater availability in such areas are not possible because fractures are not always continuous, become smaller with depth, and water does not move rapidly from one area to another. This can be a significant problem locally (DWR, 1988), yet little data exist to confirm or deny problems.

Unique Water Resources

The Middle Fork of the Cosumnes River and the Rubicon River are on the U.S. Park Service's Inventory of Wild, Scenic, and Recreational Rivers. The Middle Fork of the Cosumnes River begins at the 7,000-foot elevation and joins the North Fork 42 miles downstream. This river, along with the North Fork of the Cosumnes River, has been designated by the U.S. Park Service as a recreation resource. The Cosumnes River is the least controlled (by dams) river of its size in California. The lower reaches of the river contain the few remaining riparian woodlands that once covered much of the Central Valley.

The Rubicon River begins in the Desolation Valley and ends at its junction with the Middle Fork of the American River at Oxbow Reservoir. Of the total length of 56 miles, only 29 miles, from Hell Hole Dam to the American River confluence, are designated scenic.

Beneficial Uses

The following information on beneficial uses and water quality is derived from Section II and Table II-1 of the Regional Water Quality Control Board's Central Valley Basin Plan, updated in 1990.

The identification of beneficial uses is a major component of water quality management in California. Table 7-2 presents the designated beneficial uses of surface waters in the County as defined by the California Department of Water Resources (DWR, 1990). Protection and enhancement of these beneficial uses are the primary objectives of water quality planning efforts.

Following is a description of the different beneficial uses defined by the State and included as part of Table 7-2 (Note: Not all designations are applicable to the County's rivers and reservoirs):

- **Municipal and Domestic Supply (MUN)** includes typical use by community or municipal water systems and domestic uses for individual water supply systems. (The El Dorado Irrigation District [EID], the Georgetown Divide Public Utility District [GDPUD], and the South Tahoe Public Utilities District [STPUD] are the major public water purveyors and account for over 80 percent of water delivery in the County [Rea, 1990]). There are a number of private and mutual water companies that also deliver water. PG&E, the Bureau of Reclamation, and SMUD own and maintain several water bodies and water projects. Further details on water supply in El Dorado County can be found in the Public Services and Utilities Element.
- **Agricultural Supply (AGR)** includes crop, orchard, and pasture irrigation, stock watering, support of vegetation for range grazing, and all uses in support of farming and ranching operations.
- **Industrial Service Supply (IND)** includes uses that do not depend primarily on water quality, such as mining, cooling water supply, hydraulic conveyance, gravel washing, and fire protection.
- **Industrial Process Supply (PROC)** includes use for industrial processes and all uses related to the manufacturing of products.
- **Groundwater Recharge (GWR)** includes natural or artificial recharge for future extraction for beneficial uses.
- **Freshwater Replenishment (FRSH)** provides a source of freshwater for replenishment of inland lakes and streams.
- **Navigation (NAV)** includes commercial and naval shipping.
- **Hydroelectric Power Generation (POW)** is that supply used for hydro-power generation.

- Water-Contact Recreation (REC1) includes all recreational uses involving actual body contact with water such as swimming, wading, waterskiing, skindiving, sport fishing, uses in therapeutic spas, and other uses where ingestion of water is reasonably possible.
- Nonwater-Contact Recreation (REC2) covers the recreational uses involving the presence of water but not requiring contact with water such as picnicking, sunbathing, hiking, camping, pleasure boating, marine life study, hunting, and aesthetic enjoyment in conjunction with the above activities as well as sightseeing.
- Warm Freshwater Habitat (WARM) provides a warm water habitat to sustain aquatic resources associated with warm water environment.
- Cold Freshwater Habitat (COLD) provides a coldwater habitat to sustain aquatic resources associated with a cold water environment.
- Wildlife Habitat (WILD) provides a water supply and vegetative habitat for the maintenance of wildlife.
- Preservation of Rare and Endangered Species (RARE) provides an aquatic habitat necessary, at least in part, for the survival of certain species established as being rare and endangered species.
- Fish Migration (MIGR) provides a migration route and temporary aquatic environment for anadromous or other fish species.
- Fish Spawning (SPWN) provides a high-quality aquatic habitat especially suitable for fish spawning.

It is noted that irrigation is not listed in Table 7-2 as a beneficial use for the South Fork of the American River from source to Placerville. The El Dorado Canal, which supplies the majority of Apple Hill irrigation water, diverts water along this reach of the river. Additionally, stock watering is identified as a beneficial use for only one stream, the Middle Fork of the American, source to Folsom Lake. This is a present beneficial use of virtually all streams in the County. (The County may want to petition the RWQCB to add these as beneficial uses.)

Water Quality

Human activities such as agricultural uses, confined animals, municipal uses, industrial uses, recreational uses, mining, and urban runoff can contribute to water quality problems in surface water bodies.

Protection of water quality in California is the responsibility of several agencies, principally the Environmental Protection Agency (EPA) at the Federal level, State Water Resources Control Board (SWRCB) at the State level, Regional Water Quality Control Board (RWQCB) and Tahoe

Regional Planning Agency (TRPA) at the regional level, and local agencies at the County or local level.

The Federal Clean Water Act designates the State as the entity responsible for preparing water quality standards which in turn delegates authority to the regional boards. Through the preparation of a basin plan, the regional board establishes water quality standards, beneficial uses of water and an implementation plan to reach water quality goals within the applicable basin. This plan must be adopted by the regional board and approved by the State board. The water quality standards section is specifically reviewed by the EPA for consistency with the Clean Water Act. If the EPA does not approve the plan, further review by the regional board is required. Local agencies become involved after plan adoption and may be responsible for future implementation of the standards and ensuring that all planning is consistent with the policies and standards of the regional board (Rea, 1990).

The California Central Valley RWQCB (Region V) is the regional board with jurisdiction over the Western Slope, and the Lahontan RWQCB (Region VI) is responsible for the Tahoe Basin. The Central Valley Regional Board prepared a basin plan in 1975. A revised basin plan has been prepared and adopted by the board in 1990. The Lahontan Plan is currently being revised to provide consistency with TRPA's plan.

The Clean Water Act Amendment of 1977 required the State board to prepare a specific plan for toxic standards. While toxic standards in the basin plan are valid and applicable, the toxic standards established by the State plan supersede the basin plan. This State plan for toxic standards is currently being developed (Rea, 1990).

The RWQCB, in addition to preparing basin plans, reviews certain activities relating to water as a responsible agency under CEQA. Certain activities that do not meet water quality standards established by the plans may not be approved by the RWCQB.

In addition to overseeing water quality planning efforts at the State and regional level, the EPA reviews National Pollution Discharge Elimination System (NPDES) permits (for discharge to waters) issued by the State and regional boards. Also, the EPA administers a non-regulatory grants program that provides money to agencies to implement water quality controls.

Water Quality Objectives

Water quality objectives are established by the Regional Water Quality Control Board in order to protect beneficial uses. In some cases in El Dorado County, certain water quality objectives apply to specific surface waters (Table 7-2) while only general objectives apply to other surface waters and their tributaries. As part of the State's continuous planning process, data will be collected and more specific water quality objectives will be developed for those mineral and nutrient constituents where sufficient information is currently not available for the establishment of specific objectives.

Table 7-3 notes the objectives which apply to all water resources in the County.

Table 7-2: Beneficial Uses of El Dorado County Water Bodies

	Agriculture			Industry			Recreation			Freshwater ³ Habitat		Migration		Spawning			
	MUN	AGR	PHOC	IND	POW	REC1	REC2	WARM	COLD	MIGR	SPWN	WILD	NAV				
Surface Water Bodies ¹	Municipal and Domestic Supply	Irrigation	Stock Watering	Process	Service Supply	Power	Contact	Canoeing ² and Rafting	Other noncontact	Warm	Cold	Warm ⁴	Cold ⁵	Warm ⁴	Cold ⁵	Wildlife Habitat	Navigation
1. Central Basin Plan Sub-Area 5-A																	
American River																	
Middle Fork, source to Folsom Lake	●	●	●			●	●	●	●	□	●				●	●	
Desolation Valley Lakes							●		●		●				●	●	
Auburn Reservoir	□	□				□	□		□		□				□	□	
South Fork																	
source to Placerville	●					●	●	●	●	□	●				●	●	
Placerville to Folsom Lake	●	●				●	●	●	●	●	●					●	
Folsom Lake	●	●			□	●	●		●	●	●			●		●	
2. Central Basin Plan Sub-Area 5-B																	
Cummins River																	
sources to Nashville Reservoir (proposed)	●	●				●	●		●		●				●	●	
Nashville Reservoir (proposed)	□					□	□		□	□	□	□		□	□	□	

● = Existing Beneficial Uses

□ = Proposed Beneficial Uses

¹ Those streams not listed have the same beneficial uses as the streams, lakes, or reservoirs to which they are tributary.² Shown for streams and rivers only, with the implication that certain flows are required for this beneficial use.³ Resident does not include anadromous. Any segments with both COLD and WARM beneficial use designations will be considered COLD water bodies for the application of water quality objectives.⁴ Striped bass, sturgeon, and shad.⁵ Salmon and steelhead.

Note: Surface waters with the beneficial uses of Groundwater Recharge (GWR), Freshwater Replenishment (FRSII), and Preservation of Rare and Endangered Species (RARE) have not been identified in this plan. Surface waters of Basins 5A, 5B, and 5C falling within these beneficial use categories will be identified in the future as part of the continuous planning process to be conducted by the State Water Resources Control Board.

Source: Department of Water Resources, 1990 (Updated 00/02/03 K.R.G.)

TABLE 7-3
REGIONAL WATER QUALITY OBJECTIVES

A	Bacteria. In waters designated for contact recreation (REC1), the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed a geometric mean of 200/100 ml, nor shall more than ten percent of the total number of samples taken during any 30-day period exceed 400/100 ml.
B	Biostimulatory Substances. Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses. In most water bodies, water quality objectives for nitrogen will not be established until studies to determine the specific effects of nitrogen on algal growth in the Delta, the lower San Joaquin River, and San Francisco Bay are completed.
C	Chemical Constituents. Waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses. Water designated for use as domestic or municipal supply (MUNI) shall not contain concentrations of chemical constituents in excess of the limits specified in California Administrative Code, Title 17, Chapter 5, Subchapter 1, Group 1, Article 4, Section 7019, Tables 2, 3, and 4. The limits described therein will be reviewed on a case-by-case basis in order to assure protection of beneficial uses other than MUNI, as appropriate. To the extent of any conflict with the above, the more stringent objective applies.
D	Color. Water shall be free of discoloration that causes nuisance or adversely affects beneficial uses.
E	Dissolved Oxygen. The monthly median of the mean daily dissolved oxygen concentration shall not fall below 85 percent of saturation in the main water mass and the 95 percentile concentration shall not fall below 75 percent of saturation. The dissolved oxygen concentrations shall not be reduced below the following minimum levels at any time: <ul style="list-style-type: none"> • Waters designated WARM 5.0 mg/l • Waters designated COLD 7.0 mg/l • Waters designated SPWN 7.0 mg/l
F	Floating Material. Water shall not contain floating material in amounts that cause nuisance or adversely affect beneficial uses.
G	Oil and Grease. Waters shall not contain oils, greases, waxes or other materials in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.
H	pH. The pH shall not be depressed below 6.5 nor raised above 8.5. Changes in normal ambient pH levels shall not exceed 0.5 in fresh waters with designated COLD or WARM beneficial uses.
I	Pesticides. No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life that adversely affects beneficial uses. Pesticides are defined as any substance or mixture of substances used to control objectionable insects, weeds, rodents, fungi, or other forms of plant or animal life. Total identifiable chlorinated hydrocarbon pesticides shall not be present at concentrations detectable within the accuracy of analytical methods prescribed in Standard Methods for the Examination of Water and Wastewater, latest edition, or other equivalent methods approved by the Executive Officer. Waters designated for use as domestic or municipal supply (MUNI) shall not contain concentrations of pesticides in excess of the limiting concentrations set forth in California Administrative Code, Title 17, Chapter 5, Subchapter 1, Group 1, Article 4, Section 7019, Table 4.
J	Radioactivity. Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life. Waters designated for use as domestic or municipal supply (MUNI) shall not contain concentrations of radionuclides in excess of the limits specified in California Administrative Code, Title 17, Chapter 5, Subchapter 1, Group 1, Article 4, Section 7019, Table 5.
K	Sediment. The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.
L	Settleable Material. Waters shall not contain substances in concentrations that result in the deposition of material that cause nuisance or adversely affects beneficial uses.

TABLE 7-3
REGIONAL WATER QUALITY OBJECTIVES

M	Suspended Material. Waters shall not contain substances in concentrations that result in the deposition of materials that causes nuisance or adversely affects beneficial uses.
N	Tastes and Odors. Waters shall not contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to domestic or municipal water supplies or to fish flesh or other edible products or aquatic origin that cause nuisance or otherwise adversely affect beneficial uses.
O	<p>Temperature. The natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Board that such alteration in temperature does not adversely affect beneficial uses.</p> <ul style="list-style-type: none"> At no time or place shall the temperature of COLD intrastate water be increased more than 5°F. above natural receiving water temperature. At no time or place shall the temperature of WARM intrastate waters be increased more the 5°F. above natural receiving water temperatures.
P	<p>Total Dissolved Solids:</p> <ul style="list-style-type: none"> Shall not exceed 1,300,000 tons; Goose Lake Shall not exceed 125 mg/l (90 percentile) <ul style="list-style-type: none"> North Fork, American River, Source to Folsom Lake Middle Fork, American River, Source to Folsom Lake South Fork, American River, Source to Folsom Lake Shall not exceed 100 mg/l (90 percentile) Folsom Lake
Q	<p>Toxicity. All waters shall be maintained free of toxic substances in concentrations that are toxic to or that produce detrimental physiological response in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods as specified by the Regional Board. Objectives for toxics will have to comply with the State plan which is currently under review and awaiting adoption (Rea, 1990).</p> <p>The survival of aquatic life in surface waters, subjected to a waste discharge or otherwise controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge, or when necessary, for other control water that is consistent with the requirements for "experimental water" as described in Standard Methods for the Examination of Water and Wastewater, latest edition. As a minimum, compliance with this objective as stated in the previous sentence shall be evaluated with 96-hour bioassay.</p> <p>Additionally, effluent limits based on acute bioassays of effluents will be prescribed where appropriate, additional numerical receiving water objectives for specific toxicants will be established as sufficient data become available, and source control of toxic substances will be encouraged.</p>
R	<p>Turbidity. Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses.</p> <p>Increases in turbidity attributable to controllable water quality factors shall not exceed the following limits:</p> <ul style="list-style-type: none"> Where natural turbidity is between 0 and 50 Jackson Turbidity Units (JTU), increases shall not exceed 20 percent; Where natural turbidity is between 50 and 100 JTU, increases shall not exceed 10 JTU; and Where natural turbidity is greater than 100 JTU, increases shall not exceed 10 JTU. <p>Exceptions to the above limits will be considered when a dredging operation can cause an increase in turbidity. In this case, an allowable zone of dilution within which turbidity in excess of limits can be tolerated will be defined for the operation and prescribed in a discharge permit.</p>

TABLE 7-3
REGIONAL WATER QUALITY OBJECTIVES

S	<p>Folsom Lake. The following objectives apply in El Dorado County to Folsom Lake. To the extent of any conflict with the above, the more stringent objective applies.</p>																						
	<p>Bacteria. The fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed a geometric mean of 100/100 ml nor shall more than ten percent of the total number of samples taken during any 30-day period exceed 200/300 ml.</p>																						
	<table> <tr> <th colspan="2"><u>Inorganic Chemical Limits:</u></th></tr> <tr> <th><u>Constituents</u></th><th><u>Concentration (mg/l)</u></th></tr> <tr> <td></td><td>Maximum</td></tr> <tr> <td>Arsenic</td><td>0.01</td></tr> <tr> <td>Barium</td><td>0.1</td></tr> <tr> <td>Copper</td><td>0.01</td></tr> <tr> <td>Cyanide</td><td>0.01</td></tr> <tr> <td>Iron</td><td>0.3</td></tr> <tr> <td>Manganese</td><td>0.05</td></tr> <tr> <td>Silver</td><td>0.01</td></tr> <tr> <td>Zinc</td><td>0.1</td></tr> </table>	<u>Inorganic Chemical Limits:</u>		<u>Constituents</u>	<u>Concentration (mg/l)</u>		Maximum	Arsenic	0.01	Barium	0.1	Copper	0.01	Cyanide	0.01	Iron	0.3	Manganese	0.05	Silver	0.01	Zinc	0.1
<u>Inorganic Chemical Limits:</u>																							
<u>Constituents</u>	<u>Concentration (mg/l)</u>																						
	Maximum																						
Arsenic	0.01																						
Barium	0.1																						
Copper	0.01																						
Cyanide	0.01																						
Iron	0.3																						
Manganese	0.05																						
Silver	0.01																						
Zinc	0.1																						
	<p>Turbidity. Except for periods of storm runoff, the turbidity shall be less than or equal to 10 JTU.</p>																						

Water Pollution Sources

Human activities can contribute to water quality problems in surface water bodies. Activities in El Dorado County that affect water quality include agricultural uses, confined animals, municipal uses, industrial uses, recreational uses, mining, and urban runoff. The interrelationship between these factors, as well as their individual contributions, create numerable variables affecting water quality in the surface waters of the County.

Agricultural Uses. Agricultural waste loads are those that result from the application of irrigation water to agricultural land. Irrigation water is derived from surface water and groundwater both which contain some quantity of dissolved minerals. Evaporation and transpiration by crops removes water from the farm land leaving most of the applied salts and other constituents in the soil. These elements may be carried into surface waters or groundwater. In addition, irrigation return water may contain fertilizers and pesticides.

Confined Animals. Wastes from confined animals generally reach surface water or groundwater from one of the following sources:

- storm water runoff carrying waste material;
- runoff of washwater used by dairies to clean cows and facilities;
- runoff or leaching through the soil to groundwater of products from manure and liquid wastes applied to crop land; or
- direct deposit in receiving water where animals have access to surface waters.

In general, surface water pollution from animal wastes can be controlled by preventing the wastes from entering surface streams. Managed application of wastes to crop lands can control groundwater pollution.

Municipal and Industrial Sources. Municipal and industrial contributions to degraded water quality are a function of the type and degree of waste treatment and disposal. Municipal uses such as septic tanks and discharge points may result in high coliform counts and dissolved oxygen depressions in water bodies, respectively. Industrial uses such as sand and gravel operations and lumber mills can result in stream turbidity. According to the Federal Water Pollution Control Act Amendments of 1972, all publicly owned wastewater treatment plants must achieve required treatment levels through the "Best Practicable Waste Treatment Technology." In addition, all industries are required to conform to Federally specified treatment levels.

Recreational Activities. Being a highly desirable recreational destination, El Dorado County experiences localized water quality problems from campgrounds, recreational vehicles, back-country use, winter sports, boating, and second-home developments. Although annual waste loads from recreation areas are small compared with other basin activities, they constitute a very significant but seasonal local problem. In recreational areas, neither the County nor the Regional Board are adequately staffed or funded to adequately enforce control requirements.

Extractive Activities. Mining operations in Basins 5A, 5B, and 5C, which comprise the jurisdiction of the Central Valley RWQCB, have relatively little effect on overall basin water quality when compared with other basin activities. These operations do, however, have the potential to create more serious local water quality problems.

Most mine-created pollution occurs when storm runoff or groundwater flows through mines, dumps, and tailing ponds, and leaches chemicals from the materials. The leachate may contain heavy metals such as copper, lead, and zinc and is apt to be quite acidic. Surface runoff passes through mine areas, picks up suspended solids, and contributes to turbidity in streams. Mine-related water quality problems are often seasonal and are related to high natural runoff.

Runoff. Natural activities such as erosion and wildfire can also affect water quality. Erosion increases the total dissolved solids (TDS) content of water as it adds sedimentation to the stream. Water running over soils and rock formations can pick up additional deposits such as calcium. Ash from wildfire adds to the organic content of water thereby decreasing water quality.

Urban activities, in addition to those mentioned above, have an effect on water quality when household chemicals (i.e., pesticides, herbicides, paints) and wastes are improperly disposed. Salting of roads to melt snow is also an activity that is potentially harmful to water quality if salts runoff or are leached into waterways. In addition, heavy metals and hydrocarbons can be detected in water as a result of auto emissions and car crank case oil.

BIOLOGICAL RESOURCES

El Dorado County contains a rich diversity of vegetation and wildlife. The vegetation communities of the County include chaparral and brush lands, hardwood and coniferous forests, grass lands and meadows. Each of these communities provide habitat for a variety of wildlife species. The County also possesses rare, threatened and endangered plants, animals, and natural communities. These species and habitats are described in this section along with resource management laws that have been enacted to preserve biological resources.

Vegetation Communities and Habitats

As stated above, the County supports a wide variety of vegetative communities as shown on Figure 7-1 and described below. The primary sources used to generate Figure 7-1 include the U.S. Department of Fish & Game's *Natural Diversity Database*, the California Native Plant Society's *Inventory of Rare and Endangered Vascular Plants of California*, and the County's *1984 Open Space Element*.

Chaparral and Brush Lands. These communities exist throughout the County and include dominant flora such as manzanita, ceanothus, toyon, scrub oak, sage, and mountain mahogany. Associated wildlife includes mule deer, rabbit, badger, fox, coyote, bobcat, and scrub jay.

Hardwood Forests. This community exists in the western portion of the County in the foothills and riparian zones at low to middle mountain elevations. This habitat is utilized for grazing, watershed protection, recreation, and wildlife habitat. Vegetation consists primarily of oaks with California bay, madrone, tan oak, cottonwood, alder, maple, dogwood, sycamore, ponderosa, and gray pine. Animal species include mule deer, black bear, gray squirrel, badger, fox, raccoon, mountain lion, and fan tail pigeon.

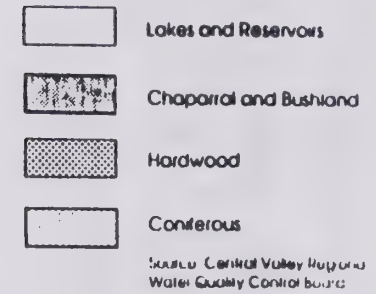
Coniferous Forests. This vegetation community ranges from the central to eastern areas of the County. Coniferous forests provide saw timber and forest products, recreation, watershed protection, and wildlife habitat. Plant species may include sugar, western white, lodgepole, ponderosa, and Jeffrey pines; red, white, and Douglas firs; mountain hemlock; oak; dogwood; tan oak; and incense cedar. It provides habitat for species such as deer, black bear, mountain lion, rabbit, porcupine, weasel, skunk, and Stellar's jay.

Grass Lands. Occurring mostly in foothills, meadows, and on plateaus, these habitat types provide grazing for livestock and wildlife habitat. The dominant flora includes wild oats, bromes, fescues, clover, filaree needlegrass, California oatgrass, and bluegrass. Animals include rabbit, fox, coyote, bobcat, and dove.

High Alpine Areas. These isolated areas in the Sierra Nevada contain sparse vegetation with frequent rock outcrops and provide habitat for rosy finches, Clark nutcrackers, pikas, marmots, golden mantle squirrels, stellar's jays, pine marten, and wolverine in limited number and distribution.

EL DORADO COUNTY GENERAL PLAN

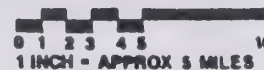
Figure: 7-1
Generalized Biological
Resources



Rare and Protected Plant Species On the Western Slope

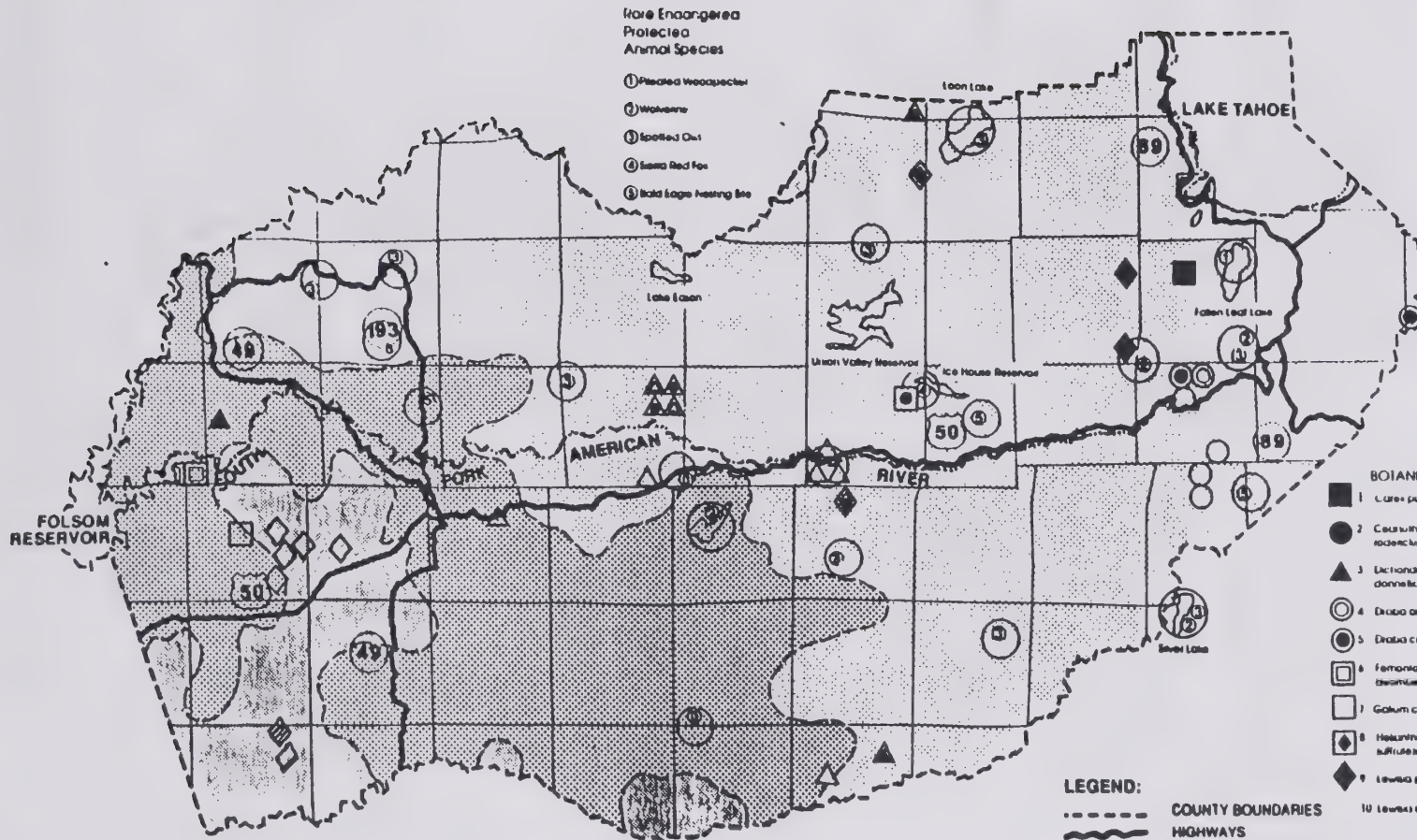
NAME			
BOTANICAL	COMMON		
1 <i>Carex pumila</i>	Sand Sedge	21 <i>Myrica hallii</i>	Sand Sweet Gale
2 <i>Ceanothus velutinus</i>	Pine Hill Ceanothus	22 <i>Adiantum pedatum</i>	Tule River Adiantum
3 <i>Lonicera chrysantha</i>	California Dandelion	23 <i>Phacelia densiflora</i>	Mealy Phacelia
4 <i>Draba alpestris</i>	Cupressus Draba	24 <i>Boerhaavia diffusa</i>	Native Yellow Cress
5 <i>Draba caudata</i>	Tule Draba	25 <i>Senecio laevis</i>	Lady's Butterweed
6 <i>Fernandesia</i>	Pine Hill Fern	26 <i>Trifolium repens</i>	Black Clover
7 <i>Gutierrezia</i>	El Dorado Gutierrezia	27 <i>Yucca elata</i>	Cock's Foot Yucca
8 <i>Helianthemum</i>	Amador Bush Rose	28 <i>Viola</i>	Field Yellow
9 <i>Lewisia</i>	Long Petiole Lewisia	29 <i>Phacelia</i>	Mealy Phacelia
10 <i>Lewisia</i>	Sand Lewisia	30 <i>Hesperis</i>	Field Yellow

LEGEND:



Rare Endangered Protected Animal Species

- 1 Pileated Woodpecker
- 2 Wolverine
- 3 Spotted Owl
- 4 Santa Red Fox
- 5 Bald Eagle Nesting Site



Riparian Corridor. These are areas which support water-dependent vegetation and wildlife while supplying cover, food, and breeding habitat for a variety of both aquatic and upland wildlife species. These areas are significant not only for the wildlife and vegetation that they support but also for the natural drainage of flood waters provided by streams and creeks and for the water purification process that occurs as water passes through these areas. The County has several types of riparian communities, including white alder, aspen, and montane riparian forests.

Wildlife

Species Diversity. A wide variety of invertebrates and vertebrates including birds, mammals, reptiles, and amphibians are present in the County. To meet the basic requirements of food, water, cover, and space for even a single species of animal, combinations of different terrestrial and aquatic communities are usually required. The availability of habitat determines the variety of wildlife present while the amount of habitat generally determines the abundance of wildlife.

There are about 355 species of wildlife in the Western Sierra Nevada Mountains (County of El Dorado, 1982). A list of common species found within the Eldorado National Forest contains as many as 340 species including 202 birds, 79 mammals, 24 reptiles, 20 fish, and 15 amphibians (U.S. Forest Service, 1988).

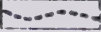


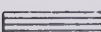




Deer Migration Corridors and Ranges. Deer migration patterns have been identified and mapped by the California Department of Fish and Game (DFG Region 2 Migratory Deer Herd Boundaries, Seasonal Range Delineations, and Migratory Patterns, 12/83). Critical winter ranges occur mostly on private lands south of U.S. Highway 50, and spring migration ranges occur largely on national forest lands managed by the U.S. Forest Service (Hinz, 1990). The maintenance of deer habitat and migration corridors is important for several reasons. Deer are an indicator species for other animal species and habitats. If deer populations are thriving, it is likely that the migratory habitat is supporting other animal species. Conversely, if deer are not well supported, other animal populations and the local natural ecosystem are probably unhealthy as well. As discussed with the CDFG (Hinz 1993), deer are affected by the density of residential development. As density increases there appears to be a direct relationship to the local decrease of the deer population. DFG recommends that in these deer migratory corridors that a minimum of 40 acres parcels be permitted. Figure 7-2 shows deer migration routes in El Dorado County.

Fisheries. Fisheries are an important natural and recreational resource and provide indirect economic benefits to the County by attracting fishermen to the area who in turn buy gas, food, tackle, and other items. Most of the County's rivers and lakes provide fisheries. The Eldorado National Forest has about 611 miles of fishable streams in the four major drainage systems. There are 297 lakes and reservoirs totalling 11,994 acres (under public and private ownership). Eleven large reservoirs account for 9,000 surface acres, the rest being mostly small, high mountain lakes (U.S. Forest Service, 1985).




EL DORADO COUNTY

GENERAL PLAN

Figure: 7-2
Deer Migration Zones

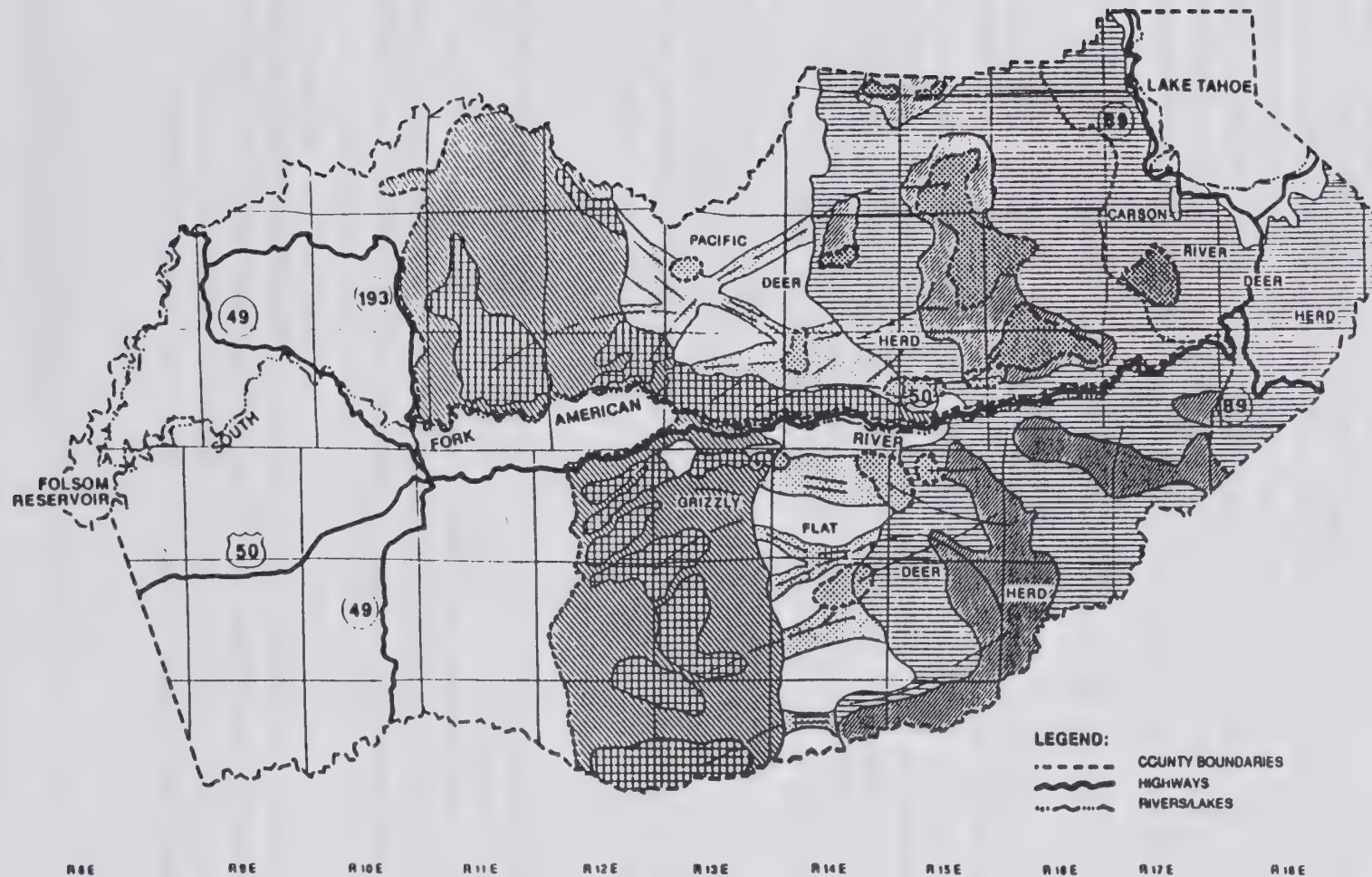
-  Herd Boundary
-  Winter Range
-  Critical Winter Range
-  Summer Range
-  Critical Summer Range
-  Major Migration Corridor
-  Known Critical Fawning Area
-  Known Holding Area

SOURCE: California Department of Fish and Game
Deer Migration Data: The 1987 Annual Report on the
Status of California's State Listed Threatened and
Endangered Plants and Animals

- LEGEND:**
-  COUNTY BOUNDARIES
 -  HIGHWAYS
 -  RIVERS/LAKES



0 1 2 3 4 5 10
1 INCH = APPROX 5 MILES



Streams and lakes in the County sustain cold and warm-water fish populations. Cold-water streams and lakes generally occur in higher elevations with water temperatures below 65-70° F. Cold-water species include rainbow, lake, eastern brook, brown, and golden trout. Warm-water habitats are usually above 70° F. in temperature and sustain populations of large- and small-mouth bass, bluegill, red-ear sunfish, and channel and white catfish (Central Valley Regional Water Quality Control Board, 1975). Only one species of fish, the Lahontan cutthroat trout, has been designated as threatened under the Federal Endangered Species Act (described in the High Interest Species/Habitats, later in this section). As of 1983, the original population of Lahontan trout in Lake Tahoe was extinct. However, populations presently exist in Marlette Lake and the tributaries of Lake Tahoe.

Fish have particular habitat requirements including suitable food supplies and cover. The removal of vegetation along watercourses reduces the quantity of suitable fish habitat and can cause an increase in water temperatures which may lead to fish mortality. Shoreline and aquatic vegetation provides cover for protection from predators and serves as a food source. Other requirements include a stable flow of water; good water quality and chemistry (including appropriate levels of dissolved oxygen, acidity, and salinity); and lack of waterway obstructions.

Rare, Threatened, Endangered, and Sensitive Wildlife Species/Habitats

Regulatory Framework. Vegetation, fish, and wildlife have environmental, recreational, commercial, educational, and aesthetic values. Various species of plants, wildlife, and fish have become extinct due to human influences. For this reason, the United States Congress passed the Endangered Species Act in 1973. The State enacted a parallel act, the California Endangered Species Act, in 1984. These two bodies of law, in conjunction with the California Environmental Quality Act and the National Environmental Policy Act (enacted in 1977), help to protect the ecosystems upon which endangered and threatened species depend.

The Federal Endangered Species Act is implemented by the U.S. Fish and Wildlife Service (FWS) while the California Department of Fish and Game (CDFG) implements the State Endangered Species Act. The two agencies sometimes coordinate protection programs or project reviews, and both publish lists of species that satisfy criteria classifying them as endangered or threatened.

Generally, the term "endangered" refers to a species in danger of becoming extinct throughout its entire range or a significant portion of its range. A "threatened" (Federal, State) or "rare" (State) species is one that could become endangered in the foreseeable future. A "sensitive" species is a viable candidate for endangered or threatened status under the Endangered Species Act. Species that have been proposed for listing but have not yet been accepted are classified as "candidate" species.

Information Sources. Several sources were used to identify rare, threatened, and endangered animals, plants, and natural communities in the County. The Natural Diversity Data Base (NDDDB) available through CDFG is a computerized inventory of the location and condition of California rare, threatened, and endangered, animals, plants, and natural communities.

The California Native Plant Society's (CNPS) *Inventory of Rare and Endangered Vascular Plants of California* (Smith and Berg, 1988) was used in addition to the NDDDB to identify high-priority plants. The Audubon Society's *Blue List for 1986* was consulted for identification of special concern birds whose population are "down" and "greatly down" in numbers. In addition to the aforementioned sources, the County's *Open Space and Conservation Element* (1984), the *Eldorado National Forest Land and Resource Management Plan* (1988), the *Preserve Sites and Implementation Strategies for Rare Plant Species in Western El Dorado County* (EIP Associates, 1991), and "*California Species of Special Concern*" (1978) were used to obtain data on rare, threatened, and endangered species in the County.

Sensitive Wildlife Species. The National Diversity Data Base identified 18 sensitive wildlife species in the County. Table 7-4 identifies 12 species that are listed (State or Federally) or are candidates for listing, and six are species of concern and/or interest.

The northern goshawk, California spotted owl, and willow flycatcher may have been affected detrimentally by past or present forest management practices. This is especially true for the goshawk and spotted owl which are thought to thrive in mature timber habitats. Reduction of these habitats has impacted the number of birds. More recent studies have confirmed that the California Spotted Owl frequents the oak woodlands and pine forests as well as the coniferous forest (Laymon, S.A., 1989. Table 7-5 shows the status and locations for each of the 18 wildlife species inventoried by the Natural Diversity Data Base, and Table 7-6 provides a comprehensive list of birds that exist or potentially exist in the County and their status.

TABLE 7-4
SENSITIVE WILDLIFE SPECIES

Listed Endangered, Threatened, Rare, and Special Interest/Concerns (State and/or Federal)	Candidate for Listing	Special Interest/Concern
Lahontan cutthroat trout (T)	Red-legged frog	Osprey
Golden eagle (P)	Mount Lyell salamander	Northern goshawk
Bald eagle (E)	Bank swallow	Spotted owl
Sierra Nevada red fox * (T)	Tricolored blackbird	Willow flycatcher
Wolverine *(T)	Yates snail	Pale big eared bat
	Maradenia mormonum bottoni	Pacific fisher
	Tahoe benthic stonefly	
T = Threatened P = Protected E = Endangered * Also candidates for Federal listing Source: Natural Diversity Data Base		

Table 7-5: Endangered, Rare, and Threatened Animal Species in El Dorado County

<u>Species</u>	<u>Status</u>	<u>Location</u>
Lahontan cutthroat trout <i>Salmo clarki henshawi</i>	Federal: Threatened State: None	Taylor Creek Tributary to Lake Tahoe; Emerald Bay Quad; T13N, R17E, S36/W
Red legged frog <i>Rana aurora draytoni</i>	Federal: Category 2, candidate for Federal listing State: None	Placerville; Placerville Quad; T10N, R11E, S0
Mount Lyell salamander <i>Hydromantes platycephalus</i>	Federal: Category 2, candidate for Federal listing State: None	East Shore Smith Lake; Pyramid Peak Quad; T12N, R16E, S99
Golden eagle <i>Aquila chrysaetos</i>	Federal: None State: Fully protected	Lovers Leap above Strawberry on U.S. Highway 50 between Kyburz & Echo Summit; Pyramid Peak Quad; T11N, R17E, S17, NW/SE
Bald eagle <i>Haliaeetus leucocephalus</i>	Federal: Endangered State: Endangered	Emerald Bay, South Lake Tahoe; Emerald Bay Quad; T13N, R17E, S22
Bank swallow <i>Riparia riparia</i>	Federal: None State: Candidate	Tahoe Keys, just north of Town of South Lake Tahoe, on Lake Tahoe; Emerald Bay Quad; T12N, R18, S5, NW/NE
Tricolored blackbird <i>Agelaius tricolor</i>	Federal: Category 2, candidate for Federal listing State: None	Crazy Horse Campground, 150 yards south of U.S. Highway 50, between Bass Lake exit and Cameron Park exit; Clarksville Quad; T9N, R9E, S8, NE/NE
Sierra Nevada red fox <i>Vulpes vulpes necator</i>	Federal: Category 2, candidate for Federal listing State: Threatened	Ice House Resort; Kyburz Quad; T11N, R14E, S11, E
Wolverine <i>Gulo gulo</i>	Federal: Category 2, candidate for Federal listing State: Threatened	Sierra crest-Echo Summit approximately 4.6 miles SE of lower Echo Lake on U.S. Highway 50, also at Gody MDWG; Echo Lake Quad; T11N, R18E, S7, SE Strawberry Creek Headquarters, near Sciots Camp; Pyramid Peak Quad; T10N, R17E, S19, NW
Yates snail <i>Ammonitella yatesi</i>	Federal: Category 2, candidate for Federal listing State: None	Pioneer Cave; Auburn Quad; T12N, R9E, S30, SW/SE
Monadenia mormonum buttoni <i>no common name</i>	Federal: Category 2, candidate for Federal listing State: None	Riverton; Riverton Quad; T11N, R14E, S30, SE/NE

Table 7-5: Endangered, Rare, and Threatened Animal Species in El Dorado County (cont.)

<u>Species</u>	<u>Status</u>	<u>Location</u>
Tahoe benthic stonefly <i>Capri lacustra</i>	Federal: Category 2, candidate for Federal listing State: None	Lake Tahoe; Meeks Bay Quad
Osprey <i>Pandion haliaetus</i>	Federal: None State: None	Just south of Rubicon Point, 2 miles NNW of Emerald Bay Mouth, Lake Tahoe; Emerald Bay Quad; T13N, R17E, S10, NW
Northern goshawk <i>Accipiter gentilis</i>	Federal: None State: None	One Eye Creek; Slate Mountain Quad; T12N, R18E, S24, NE Angora Creek; Emerald Bay Quad; T12N, R17E, S24, NE Trout Creek; South Lake Tahoe Quad; T12N, R18E, S15, SE Tahoe Valley Campground; South Lake Tahoe Quad; T12N, R18E, S9, NW Baltic Ridge; Stump Springs Quad; T10N, R14E, S35
Spotted Owl <i>Strix occidentalis</i>	Federal: None State: None	Peddler Hill; Peddler Hill Quad Caldor; Caldor Quad Omo Ranch; Omo Ranch Quad Leek Springs Hill; Leek Springs Hill Quad Stump Springs; Stump Springs Quad Sly Park; Sly Park Quad Echo Lake; Echo Lake Quad Pyramid Peak; Pyramid Peak Quad Riverton; Riverton Quad Pollock; Pollock Pines Quad Slate Mountain; Slate Mountain Quad

Table 7-5: Endangered, Rare, and Threatened Animal Species in El Dorado County (cont.)

<u>Species</u>	<u>Status</u>	<u>Location</u>
Spotted Owl <i>Strix occidentalis (cont.)</i>	Federal: None State: None	Garden Valley; Garden Valley Quad Rockbound Valley; Rockbound Valley Quad Robbs Peak; Robbs Peak Quad Georgetown; Georgetown Quad
Willow flycatcher <i>Empidonax traillii</i>	Federal: None State: None	1.3 miles west of Upper Forni on the Jeep Trail Road, SW of Pyramid Peak, Eldorado National Forest; Pyramid Peak Quad; T11N, R16E, S10, NE Pack Saddle Pass Road, approximately 6 miles NW of Silver Lake, Eldorado National Forest; Tragedy Springs Quad; T10N, R16E, S10, NW
Pale Big Eared bat <i>Plecotus townsendii pallescens</i>	Federal: None State: None	2.5 miles ENE of Auburn; Auburn Quad; T12N, R8E, S12, NE
Pacific fisher <i>Martes pennanti pacifica</i>	Federal: None State: None	Alpine Campground, 4 miles S of Meyers, Eldorado National Forest; Echo Lake Quad; T11N, R18E, S17 1.5 miles S. of Tahoma on west shore of Lake Tahoe; Meeks Bay Quad; T14N, R17E, S17, SE

Source: Source: Natural Diversity Data Base, 1990

The Eldorado National Forest Land and Resource Management Plan Final Environmental Impact Report appendix (U.S. Forest, 1988) also indicates the following bird and mammal species as sensitive:

- Great gray owl
- Marsh hawk
- Peregrine falcon
- Pileated woodpecker
- Prairie falcon
- Stellar's jay
- Northern flying squirrel
- River otter

TABLE 7-6
POTENTIAL BIRD SPECIES OCCURRING IN EL DORADO COUNTY

Species	Federal	State	Other
<i>Family Gaviidae</i> Common Loon	—	CSC	—
<i>Family Pelecanidae</i> American White Pelican	—	CSC	—
<i>Family Phalacrocoracidae</i> Double-crested Cormorant	—	CSC	—
<i>Family Ardeidae</i> Least Bittern American Bittern	— —	BL —	BL BL
<i>Family Anatidae</i> Fulvous Whistling Duck Aleutian Canada Goose	C2 E	CSC —	— —
<i>Family Accipitridae</i> Osprey Bald Eagle Golden Eagle Northern Harrier Sharp-shinned Hawk Cooper's Hawk Northern Goshawk Red-shouldered Hawk Swainson's Hawk Black-Shouldered Kite	— E CSC — — — — — — —	CSC E, CFP CSC, CFP CSC CSC CSC CSC — CSC CSC	— — — BL BL BL — BL — —
<i>Family Falconidae</i> Merlin Peregrine Falcon Prairie Falcon	— E —	CSC E CSC	— — —
<i>Family Phasianidae</i> Sage Grouse	—	CSC	—
<i>Family Gruidae</i> Sandhill Crane	—	T, CFP	—

TABLE 7-6
POTENTIAL BIRD SPECIES OCCURRING IN EL DORADO COUNTY

Species	Federal	State	Other
<i>Family Charadriidae</i>			
Snowy Plover	C2	CSC	--
Mountain Plover	C2	--	--
<i>Family Cuculidae</i>			
Western Yellow-billed Cuckoo	C2	E	BL
<i>Family Strigidae</i>			
Short-eared Owl	--	CSC	BL
Long-eared Owl	--	CSC	--
Burrowing Owl	--	CSC	--
Great Gray Owl	--	E	--
Spotted Owl	CSC	CSC	BL
<i>Family Caprimulgidae</i>			
Common Nighthawk	--	--	BL
<i>Family Apodidae</i>			
Black Swift	--	CSC	--
<i>Family Tyrannidae</i>			
Willow Flycatcher	--	CSC	--
<i>Family Hirundinidae</i>			
Purple Martin	--	CSC	--
Bonk Swallow	--	CSC	--
<i>Family Troglodytidae</i>			
Bewick's Wren	--	--	BL
<i>Family Laniidae</i>			
Loggerhead Shrike	--	--	BL
<i>Family Emberizidae</i>			
Yellow Warbler	--	CSC	--
Yellow-breasted Chat	--	CSC	--

Source: ERC Environmental and Energy Services Co., 1990

LEGEND

E Endangered

T Threatened

CSC California Species of Special Concern (Remsen, 1978)

CFP California Fully Protected

BL Audubon Society Blue List (Tate, 1986)

C2 Candidate for Federal Listing, Category 2

Plants. The Natural Diversity Data Base identifies sensitive plant species in the County. Table 7-7 identifies 15 species that are listed (State or Federal) or are candidates for listing, and four that are species of concern and/or interest:

TABLE 7-7
SENSITIVE PLANT SPECIES

State Listed Rare and Endangered*	Candidates for Listing	Special Interest/Concern
Pine Hill flannel bush (R)	Sierra sedge	Short petaled campion
Pine Hill ceanothus (R)	Pleasant Valley mariposa lily	Tahoe draba
Tahoe yellow cress (E)	Red Hill's soaproot	Niasenana manzanita
Stebbins morning glory (E)	Long petaled lewisia	Parry's horkelia
El Dorado bedstraw (R)	Saw toothed lewisia	
Layne's butterweed	Bisbee Peak rush-rose	
	Stebbin's phacelia	
	El Dorado mule ears	
<p>R = Rare E = Endangered</p> <p>* All State listed species are also candidates for Federal listing</p> <p>Source: <i>Natural Diversity Data Base, 1990</i></p>		

In addition to the plants designated by the NDDB, the California Native Plant Society identifies the following plant species as Plants of Limited Distribution -- A Watch List (List 4). Although these plants listed below are not rare, CNPS recommends regular monitoring.

- Sierra bolandra• Hoary naverretia
- Davy's sedge• Yellow bur navarretia
- Sierra clarkia• Mariposa phacelia
- Branched draba• Sierra podistera
- Tahoe haplopappus• Small bur reed*

* CNPS List 3; plants about which more information is needed -- a review list.

Gabbro/ Serpentine Soils Area/Rare Plant Preserve Program

Seven of the species listed in Table 7-8 above are endemic to the gabbro/serpentine soils area known as the Pine Hill Intrusion. This area extends from Shingle Springs (south of U.S. Highway 50) to the Salmon Falls area near Folsom Lake, encompassing over 40,000 acres (map on file with the Planning Department). In March of 1993, a Rare Plant Preserve Program was approved by the County Board of Supervisors. A detailed description of the program is contained in Appendix I. In summary, the program identified four preserve sites within the gabbro soils area to be acquired through development projects and conservation easements. Exhibit C depicts the preserve sites. The sites are identified as Ecological Preserves 1, 2, 3, and 4 on the General Plan map.

Table 7-8: Endangered, Rare, and Threatened Plant Species in El Dorado County

<u>Species</u>	<u>Status</u>	<u>Location</u>
Sierra sedge <i>Carex paucifructus</i>	Federal: Category 2, candidate for Federal listing State: None CNPS: List 3	Pyramid Peak Quad: "Devil's Basin," Desolation Wilderness; T12N, R17E, S0 Emerald Bay Quad: Plainback of Mount Tullae; T12N, R17E, S0 SW
Pleasant Valley Mariposa lily <i>Calochortus clevatus</i> var <i>avius</i>	Federal: Category 2, candidate for Federal listing State: None CNPS: List 4	Caldor Quad: Barney Ridge, just east of Oregon Gulch, SE to near Cook's Station; on road from Grizzley Flat to Caldor, 0.2 miles past JCT marked "Plummer Ridge Guard Station;" 1.1 miles S of Caldor on North South Road; 0.1 miles E of confluence of Dogtown and Middle Dry Creek; 4.3 miles W of Caldor on former Caldor RR grade; N of Dogtown Creek, S of Plummer Ridge, 2 air miles WSW of Caldor; Sly Park Quad: N of Clear Creek Road, approximately 3.5 air miles SE of Camino; 200 feet above Sly Park Creek, 0.5 miles SSE of Sly Park Guard Station; Stump Springs Quad: between Long Canyon and Big Canyon about 0.5 miles E of confluence; near road N of Little Pebble Canyon Camino Quad: approximately 3 air miles E of Camino Peddler Hill Quad: 1.1 miles S of Junction Cattle Creek Road and Telephone Ridge Road on Telephone Ridge Road

Table 7-8: Endangered, Rare and Threatened Plant Species in El Dorado County (cont)

<u>Species</u>	<u>Status</u>	<u>Location</u>
Red Hills soaproot <i>Chlorogalum grandiflorum</i>	Federal: Category 2, candidate for Federal listing State: None CNPS: List 1B	Shingle Springs Quad: 1.5 miles W of Shingle Springs, just N of Frontage Road; top of Pine Hill, W of Towers and S of Ridge running toward east; Slope above Stanford Court off Starbuck Road near base of Pine Hill; Pilot Hill Quad: E of Salmon Falls Road and S of South Fork of American River;
Long-petaled lewisia <i>Lewisia pygmaea ssp longipelata</i>	Federal: Category 2, candidate for Federal listing State: None CNPS: 1B	Echo Lake Quad: above Lost and Triangle Lakes, near crest of Keith's Dome Ridge, Desolation Wilderness; Pyramid Peak Quad: cirque on NW slope of Mount Price; Desolation Wilderness, from 8600 to 9400 foot elevation; Basin above Lyons Lake, Desolation Wilderness; Rockbound Valley Quad: Granite ledges above Top Lake, Desolation Wilderness, Saddle 0.7 air miles W of Dicks Lake, Desolation Wilderness;

Table 7-8: Endangered, Rare and Threatened Plant Species in El Dorado County (cont)

<u>Species</u>	<u>Status</u>	<u>Location</u>
Saw-toothed lewisia <i>Lewisia serrata</i>	Federal: Category 2, candidate for Federal listing State: None CNPS: List 1B	Riverton Quad: approximately 0.6 air miles W of Potts Cabin, S of Silver Creek, near junction N Reservoir at Dam site; Pollock Pines Quad: Jay Bird Creek, above Jay Bird Powerhouse at Falls, in cracks of canyon walls at falls base; Devil Peak Quad: approximately 0.4 air miles S of Rubicon River, in humidity zones of waterfall on Leonardi Spring; Leonardi Spring water fall, S of Rubicon River;
Pine Hill flannel brush <i>Fremontodendron decumbens</i>	Federal: Category 2, candidate for Federal listing State: Rare CNPS: List 1B	Shingle Springs Quad: Pine Hill at lookout, on ridge to W, knoll to NE and on road about 2 miles WNW of Rescue; Hilltop about 1 mile NE of Pine Hill lookout, ridge between section 10 and 15, shallow ravine at headwater of White Oak Creek; approximately 0.5 air miles NW of Pine Hill; about 0.6 air miles NW of Jayhawk Cemetery, on N side of hill near summit, NE of Pine Hill; Clarksville Quad: SE of Deer Valley Road and W of Starbuck Road, W of Pine Hill; E of Deer Valley Road and W of Starbuck Road, W of Pine Hill;

Table 7-8: Endangered, Rare and Threatened Plant Species in El Dorado County (cont)

<u>Species</u>	<u>Status</u>	<u>Location</u>
Bisbee Peak rush-rose <i>Helianthemum suffrutescens</i>	Federal: Category 2, candidate for Federal listing State: None CNPS: List 1B	Shingle Springs Quad: Pine Hill near top, E of lookout; Pilot Hill Quad: S of South Fork American River, approximately 1 air mile E of Salmon Falls Road; S of South Fork American River N of Wildcat Canyon, 0.4 air miles N of 1483 foot elevation hill; N of South Fork American River approximately 1 air mile ENE of Salmon Falls Road crossings; S of South Fork American River, E of Salmon Falls Road, 0.4 air miles SE of 1266 foot elevation hill;
Cup Lake draba <i>Draba asterophora</i> var <i>macrocarpa</i>	Federal: Category 2, candidate for Federal listing State: None CNPS: List 1B	Echo Lake Quad: Cup Lake; Saucer Lake

Table 7-8: Endangered, Rare and Threatened Plant Species in El Dorado County (cont)

<u>Species</u>	<u>Status</u>	<u>Location</u>
Tahoe yellow cress <i>Rorripa subumbellata</i>	Federal: Category 1, candidate for Federal listing State: Endangered CNPS: List 1B	<p>South Lake Tahoe Quad: S of Edgewood Golfcourse clubhouse, Lake Tahoe;</p> <p>Tahoe Meadows, between Bijou Park and Stateline;</p> <p>Bijou Park, shore of Lake Tahoe, just W of Ski Run Blvd, South Lake Tahoe;</p> <p>E of Timberbrook Marina;</p> <p>Moist backshore area N of Berkeley Ave and near Rushes at Regan Beach, Al Tahoe;</p> <p>El Dorado Beach, between Bijou and Al Tahoe; Truckee Marsh, E bank, Lake Tahoe;</p> <p>Emerald Bay Quad: Upper Truckee River Marsh, lake shore just W of river mouth; Lighthouse shores, Tahoe Keys; about 50 feet NW of Taylor Creek mouth, also along lagoon nearby;</p> <p>S Bank of Lagoon, W of Baldwin Beach; Kiva Beach, between Pope Estate and Valhalla Estate, near Camp Richardson;</p> <p>Emerald Bay Boat Camp, about 25 feet NE of boat dock; Vikingsholm Boat Harbor, N of mouth of Eagle Creek, Emerald Bay;</p> <p>Meeks Bay Quad: S end of Rubicon Bay; Gabion revetment N of Meeks Creek on Meeks Bay</p>

Table 7-8: Endangered, Rare and Threatened Plant Species in El Dorado County (cont)

<u>Species</u>	<u>Status</u>	<u>Location</u>
Pine Hill ceanothus <i>Ceanothus roderickii</i>	Federal: Category 2, candidate for Federal listing State: Rare CNPS: List 1B	<p>Shingle Springs Quad: 1-5 miles W of Shingle Springs on U.S. Highway 50 on both sides of road;</p> <p>Along U.S. Highway 50 about 3 miles W of Shingle Springs;</p> <p>Pine Hill summit and along road below Pine Hill lookout; 50 yards NW of Junction Meder and Cameron Park Drive;</p> <p>approximately 1 mile N of Cameron Park turn-off from U.S. Highway 50, near Shingle Springs;</p> <p>S of White Oak Flat, approximately 2 miles N of U.S. Highway 50, near Shingle Springs;</p> <p>Sudbury Road, above and east of Cameron Park Drive;</p> <p>Pilot Hill Quad: S of South Fork American River, E of Salmon Falls Road track, E of Folsom Lake;</p> <p>W side of Salmon Falls Road, approximately 0.5 miles S of bridge on South Fork American River;</p> <p>S of South Fork American River, approximately 1 mile E of Salmon Falls Road;</p>

Table 7-8: Endangered, Rare and Threatened Plant Species in El Dorado County (cont)

<u>Species</u>	<u>Status</u>	<u>Location</u>
Stebbins' morning glory <i>Calystegia stebbinsii</i>	Federal: Category 2, candidate for Federal listing State: Endangered CNPS: List 1B	<p>Shingle Springs Quad: 0.3-0.6 miles E of Cameron Park Drive overpass on both sides of U.S. Highway 50;</p> <p>3 miles W of Shingle Springs exit on N side of U.S. Highway 50; N side of U.S. Highway 50, Frontage Road, Coloma off-ramp, 9 miles W of Placerville;</p> <p>50 yards NE of Junction of Meder Road and Cameron Park Drive near airport, 1.75 miles N of U.S. Highway 50;</p> <p>about 0.75 air miles WSW of Shingle Springs, S of U.S. Highway 50, W of road to Latrobe;</p> <p>about 1 mile N of U.S. Highway 50, S of Meder Road, about 1 air mile NE of Cameron park turn-off;</p> <p>S of White Oak Flat, approximately 2 miles N of U.S. Highway 50, near Shingle Springs;</p> <p>Pilot Hill Quad: S of South Fork American River, E of Salmon Falls Road;</p> <p>Salmon Falls Road, about 0.55 air miles SSW of South Fork American River crossing;</p> <p>S of South Fork American River, approximately 1 air mile E of Salmon Falls Road;</p> <p>N of South Fork American River approximately 1 air mile ENE of Salmon Falls Road crossing;</p>

Table 7-8: Endangered, Rare and Threatened Plant Species in El Dorado County (cont)

<u>Species</u>	<u>Status</u>	<u>Location</u>
Stebbins' phacelia <i>Phacelia stebbinsii</i>	Federal: Category 2, candidate for Federal listing State: None CNPS: List 2	<p>Pollock Pines Quad: immediately N of Junction of Sugar Pine Creek and unnamed creek, 0.5 miles W of Silver Creek;</p> <p>Jaybird Powerhouse Road, 0.5 miles NNW of Camino Reservoir; 0.2 miles E of Silver Creek;</p> <p>NW facing ledges in Jaybird Canyon, behind Powerhouse, 100 feet S of waterfalls;</p> <p>Devils Peak Quad: on W facing slope within 20 feet of Leonardi Spring waterfall;</p> <p>Tunnel Hill Quad: below waterfall in inner gorge of Pilot Creek, 0.85 miles downstream from Junction with Rubicon River;</p> <p>large bedrock expanse in inner gorge of Pilot Creek, 1.5 miles S of junction with Rubicon River;</p> <p>In gorge of Pilot Creek, 1.75 miles S of junction with Rubicon River N of and adjacent to junction with side creek;</p> <p>Loon Lake Quad: Wentwork Pike NW and SW faces within 50 feet of ridgetop, also on basalt flow N of Francis;</p> <p>Riverton Quad: Union Valley Dam just below spillway, on N side of Silver Creek;</p> <p>1 mile SE of Union Valley Dam 0.25 miles above to 0.2 miles below Junction Dam S side of Silver Creek;</p>

Table 7-8: Endangered, Rare and Threatened Plant Species in El Dorado County (cont)

<u>Species</u>	<u>Status</u>	<u>Location</u>
El Dorado bedstraw <i>Galium californicum ssp. sierrae</i>	Federal: Category 2, candidate for Federal listing State: Rare CNPS: --	Pilot Hill Quad: near confluence of Sweetwater Creek and South Fork American River and Folsom Lake; approximately 0.5 miles S of New Salmon Falls bridge; South Fork American River, about 10 miles NE of Folsom; ravine opening into South Fork American River, 2 miles E of Salmon Falls bridge, E of Folsom Lake; 2 miles SE of Salmon Falls Bridge, E side of Lake Folsom; Shingle Springs Quad: Pine Hill , including area around summit lookout, W ridge, NE ridge, and down road to gate; first ridge to NE of Pine Hills about 1 mile NE of Pine Hill lookout;

Table 7-8: Endangered, Rare and Threatened Plant Species in El Dorado County (cont)

<u>Species</u>	<u>Status</u>	<u>Location</u>
Layne's butterweed <i>Senecio layneae</i>	Federal: Category 2, candidate for Federal listing State: Rare CNPS: List 1B	<p>Shingle Springs Quad: 10.5 miles E of Pine Hill on S side of Glen Kamp Road; NE of Cameron airport, E of Cameron Park Drive, Cameron Park;</p> <p>W of White Oak Flats on S side of Green Valley Road; S of White Oak Flat; SE of Cameron airport on N side of Cameron Park Drive;</p> <p>E of Cameron Park, SW 1/4 S 1/4 sec 35; E side of Cameron Park Drive in Cameron Park;</p> <p>E of Cameron Park, N of U.S. Highway 50; along U.S. Highway 50 from Latrobe turn-off W almost to Cameron Park turn-off, W of Placerville; Pine Hill;</p> <p>approximately 1 mile S on South Shingle Road, SW of Shingle Springs;</p> <p>SW of Shingle Springs; 0.5 miles S of U.S. Highway 50 on S Shingle Spring Road, SW of Shingle Springs;</p> <p>approximately 1 mile N of Cameron Park turn-off from U.S. Highway 50;</p> <p>E side of Lotus Road, north of bridge approximately 2.0 air miles W of Funny Bug Mine;</p> <p>near Starbucks Vineyard between Coloma Road and Jayhawk Road;</p> <p>Georgetown Quad: Little Bald Mountain; along Traverse Creek Road; Bear Creek Road, 0.55 miles S of Hwy 193;</p> <p>Placerville Quad: Weber Creek, near Placerville;</p>

Table 7-8: Endangered, Rare and Threatened Plant Species in El Dorado County (cont)

<u>Species</u>	<u>Status</u>	<u>Location</u>
Layne's butterweed <i>Senecio layneae</i> (cont.)	Federal: Category 2, candidate for Federal listing State: Rare CNPS: List 1B	<p>Clarksville Quad: above sandbar in forks of Sweetwater Creek, 2 miles above mouth, Sierra Foothills; on Bass Lake Road, W of Deer Creek; on Bass Lake Road, approximately 1 mile NE of Bass Lake; 1 air mile NE of Bass Lake; SW of Deer Creek, 1 air mile ENE of Bass Lake;</p> <p>Pilot Hill Quad: S of South Fork American River, N of Wildcat Canyon, 0.4 air miles N of 1482 foot elevation hill;</p> <p>S of South Fork American River near top of ridge E of Salmon Falls Road crossing;</p> <p>S of South Fork American River; E of Salmon Falls Road, 0.5 air miles NME of 1361 foot hill;</p> <p>just W of Salmon Falls Road, 0.75 miles S of bridge on South Fork American River</p>
El Dorado County mule ears <i>Wyethia reticulata</i>	Federal: Category 2, candidate for Federal listing State: None CNPS: List 1B	<p>Shingle Springs Quad: about 1.5 miles W of Shingle Springs on both sides of I-80; 0.9 miles N of U.S. Highway 50, E side of Country Club Road on Road cut, Cameron Park;</p> <p>ridge about 0.9 air miles N of Pine Hill Summit; Pine Hill, along access road and scattered on all slopes near summit and on burned area;</p> <p>just S and W of White Oak Flat along road and Green Valley Road;</p> <p>along road S of White Oak Flat, Cameron Park; N of Rescue approximately 100 yards along Deer Valley Road to 0.25 miles W of Rescue, Green Valley Road;</p> <p>1 mile N of Rescue, along Deer Valley Road; approximately 0.7 miles N of junction Green Valley Road and Deer Valley Road on W side Deer Valley Road;</p>

Table 7-8: Endangered, Rare and Threatened Plant Species in El Dorado County (cont)

<u>Species</u>	<u>Status</u>	<u>Location</u>
El Dorado County mule ears <i>Wyethia reticulata</i> (cont.)	Federal: Category 2, candidate for Federal listing State: None CNPS: List 1B	<p>White Oak Flat N side of Green Valley Road;</p> <p>from 0.1 miles E of Sudbury Road to NE, upslope and W of creek, Cameron Park;</p> <p>Meder Road about 0.2 mile E of junction with Sudbury Road, Cameron Park, S side of Meder Road;</p> <p>Clarksville Quad: along Martel Creek, 1.5 miles off Deer Valley Road; Sweetwater Creek; Simpsons Ranch;</p> <p>Pilot Hill Quad: approximately 0.5 miles S of Natomas Diversion Dam on the South Fork American River;</p> <p>approximately 0.5 air miles SSW of confluence of Weber Creek with South Fork American River, E side of unnamed creek;</p> <p>along E-W ORV track, E of Folsom Lake; S of South Fork American River, E of Salmon Falls Road, 0.5 air miles E of 1266 foot elevation hill;</p> <p>S of South Fork American River, N of Wildcat Canyon, 0.4 air miles N of 1482 foot elevation hill;</p> <p>N of S Fork American River approximately 1 air mile ENE of Salmon Falls Road crossing;</p> <p>S of South Fork American River, W of Salmon Falls Road, opposite Indian Springs Creek;</p> <p>S of South Fork American River, E side of Salmon Falls Road, 0.6 air miles E of cemetery;</p>

Table 7-8: Endangered, Rare and Threatened Plant Species in El Dorado County (cont)

<u>Species</u>	<u>Status</u>	<u>Location</u>
Short-petaled campion <i>Silene invisa</i>	Federal: 3C withdrawn from candidacy State: None	18 separate locations; for a detailed description of observation sites, see Appendix B, Natural Diversity Data Base
Tahoe Draba	Federal: 3C withdrawn from candidacy State: None	See Appendix B, for observation sites Natural Diversity Data Base
Nissenan manzanita <i>Arctostaphylos nissenana</i>	Federal: 3C withdrawn from candidacy State: None	See Appendix B for locations (10)
Parry's horkelia <i>Horkelia parryi</i>	Federal: None State: None	See Appendix B for locations (3)

Source: Source: Natural Diversity Data Base, 1990.

Natural Communities. The Natural Diversity Data Base identifies four sensitive natural communities, none of which is State or Federally listed, all of which are of high quality and limited distribution. Table 7-9 identifies these sensitive natural communities in El Dorado County and their locations.

TABLE 7-9 SENSITIVE NATURAL COMMUNITIES IN EL DORADO COUNTY		
Natural Community	Status	Location
Sphagnum Bog	Federal: none State: none	Pollock Pines Quad: Kings Meadow; Freel Peak Quad: Grass Lake; Echo Lake Quad: Osgood Swamp
Fen	Federal: none State: non	Meeks Bay Quad: adjacent to General Creek, Sugar Pine Point State Park, Lake Tahoe
Valley Dystrophic Lake	Federal: none State: none	Freel Peak Quad: Grass Lake, near Luther Pass, one mile north of Water-house Peak
Valley Rainbow Trout Stream	Federal: none State: non	Caldor Quad: Middle Fork Cosumnes River from near Henry's Diggins to confluence of Anderson Canyon Creek; Stump Springs Quad: North Fork Cosumnes River between Sweeneys Crossing and confluence of Buckskin Joe Spring Creek
Natural Diversity Data Base, 1990		

CULTURAL RESOURCES

Cultural resources include both archaeological and historical resources that have been manufactured, affected, or altered by human forces. Archaeological resources include prehistoric and historic remains of past human activities including small scatters of stone flakes (residue from prehistoric tool manufacture), remains of prehistoric villages, cemeteries, bedrock milling features, refuse deposits, religious or ceremonial sites, and landscapes. These resources may be in either a surface and subsurface context. They may also be identified on the basis of significance to Native Americans. Historic resources include standing buildings that can be classified as historic architecture and structures, features, or landscapes that are commonly over 50 years old.

Sources used to gather data on archaeological resources in the County include the El Dorado County Planning Department, North Central Information Center, El Dorado County Historical Society, El Dorado County Heritage Association, and the State Office of Historic Preservation.

Regulatory Framework

Federal. Implementation of any project involving Federal funds or Federal lands requires compliance with Section 106 of the National Historic Preservation Act of 1966 often in conjunction with project review under the National Environmental Policy Act (NEPA). Pursuant to Section 106, the significance of the resource(s) must be determined before a project may be implemented. Under Federal guidelines, a property must generally be over 50 years old and meet integrity standards and other criteria in order to qualify for inclusion in the National Register of Historic Places. These criteria include:

Criteria A - association with events that have made a significant contribution to the broad patterns of our history;

Criteria B - association with the lives of persons significant in our past;

Criteria C - that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant distinguishable entity whose components may lack individual distinction; and

Criteria D - that have yielded or may be likely to yield information important in history or prehistory.

Designation as a National Register site enhances rather than precludes the importance of resources on the State or local level.

State. State regulations regarding cultural resources are described in CEQA, Appendix G, and Appendix K. CEQA, Appendix G(j) states that a project will normally have significant effect on the environment if it will "disrupt or adversely affect a prehistoric or historic archaeological site or social group...." CEQA, Appendix K, includes the following criteria for identification of "important" archaeological resources.

- A. Is associated with an event or person of:
 - 1. Recognized significance in California or American history; or
 - 2. Recognized scientific importance in prehistory.
- B. Can provide information which is both of demonstrable public interest and useful in addressing scientifically consequential and reasonable or archaeological research questions;
- C. Has a special or particular quality such as oldest, best example, largest, or last surviving example of its kind;

- D. Is at least 100 years old and possesses substantial stratigraphic integrity; or
- E. Involves important research questions that historical research has shown can be answered only with archaeological methods.

Local. The County does not currently have an ordinance or a committee dedicated to historic and prehistoric cultural resources. However, several efforts undertaken in recent years demonstrate local recognition of the area's cultural resources. A booklet published in the 1980s, entitled "Historic Design Guide, El Dorado County," contains guidelines pertaining to the care and conservation of historic architectural resources. Historic resources were inventoried on a County-wide level in the Open Space and Conservation Element (El Dorado County, 1984), the El Dorado County Recreation Plan (El Dorado County, undated), and the Historical Perspective Supplement for the Pleasant Valley/Oak Hill/Sly Park Area Plan (Peabody 1988).

In 1989, more stringent protection measures were introduced by the Planning Department which included the requirement for archaeological record searches as a condition of approval for most discretionary projects. Record searches are conducted by the North Central Information Center under the auspices of the State Office of Historic Preservation. The purpose of the North Central Information Center (one of several throughout the State) is to help preserve and catalog the State's prehistoric and historic resources. Archaeologists at the Information Center review and comment on the potential for the presence of cultural resources on any given project site (Russo, 1990).

Archaeological Resources

Cultural resources currently identified within the County include archaeological, historical, and historic architectural resources. Although many resources have been evaluated under Federal and State criteria and have been formally designated as significant resources, a substantial portion of the land under County jurisdiction remains unsurveyed.

As discussed above, the North Central Information Center at California State University, Sacramento, maintains a file of site records and reports that have been submitted upon completion of surveys in the County. To date, there are approximately 850 prehistoric and historic archaeological sites assigned State trinomial designations in El Dorado County, and over 300 additional site records that have not been processed (Russo, 1993). In addition to the recorded historic archaeological sites, there are 27 State Historic Landmarks, 14 properties listed on the National Register, 9 properties declared eligible for inclusion in the National Register, and 25 named gold mining districts.

Prehistoric. The area of El Dorado County within the Sierra Nevada foothills is rich in archaeological sites. Contemporary Nisenan (Southern Maidu) people, Eastern Miwok, and Washoe people are the descendants of prehistoric cultures who occupied the region for thousands of years. The Placerville area has archaeological sites that extend from the historic Nisenan period circa 1800 A.D. to as far back as 1500 B.C. On the eastern edge of the County, the Lake Tahoe region has a far greater record of Native American occupation extending from the Spooner Phase circa 5000 B.C. to the late Washoe period in A.D. 1800.

Rural lands and undeveloped lands, particularly those in meadow areas, near river banks and streams, in areas with caves and rock shelters and generally below 4,000 feet of elevation, are expected to contain a wide variety of prehistoric sites. Sites vary from large village complexes with human burials to isolated camp sites and food processing areas. Currently the U.S. Forest Service is conducting on-going inventories for lands slated for timber sales and other activities. Within the non-Federal lands of El Dorado County, the Planning Department is requiring record searches and frequently field surveys on private lands prior to development approvals. Both the Federal and County actions can be expected to produce information about hundreds, if not thousands, of additional prehistoric sites. Increasingly, Native Americans are concerned with the vandalism and destruction of their ancestral sites and wish to have a more active role in the planning and development process to ensure the protection and enhancement of these non-renewable resources. In that regard, Native American groups are notified and consulted regarding projects within native jurisdiction.

Historic. The wealth of historic cultural resources located in El Dorado County can be attributed in large part to the discovery of gold. James Marshall, an employee of Captain John Sutter, discovered gold at Sutter's Mill near Coloma in 1848 which sparked the mass migration of people from all over the world to California's Mother Lode area. Between 1848 and 1852, boom towns appeared overnight. Some of these boom towns have disappeared, leaving few obvious traces of the former settlements while others continue to flourish. Some towns have undergone changes over the years such as the frontier town of Hangtown which later became Placerville, the El Dorado County seat.

The County is traversed by many historic trails dating from the Gold Rush era and earlier, the most well-known being the Mormon-Carson Trail and the Pony Express Trail. Some of the historic trails incorporate portions of earlier trails established by Native American groups that lived in the area.

Within El Dorado County there are 14 sites currently listed in the National Register of Historic Places. These sites are listed along with other locations designated by State and local agencies in Tables 7-10, 7-11, 7-12, and 7-13. The Crawford Ditch is currently being considered for inclusion in the National Register (Peabody, 1990). This ditch represents only one of many miles of ditches located throughout the County which conveyed water to and from the mining areas. Since the decrease in mining activities, these ditches have been important for agricultural and other uses (Cola, 1990).

TABLE 7-10
CULTURAL RESOURCE SITES LISTED IN THE NATIONAL REGISTER OF HISTORIC PLACES

Site Name	Location
Baldwin Estate	NW of U.S. Highway 50 and CA 89 junction on N side of CA 89, South Lake Tahoe
Bayley Hotel	N of Pilot Hill on CA 49, Pilot Hill vicinity
Coloma	7 miles NW of Placerville on CA 89, Placerville vicinity
Combella-Blair House	3059 Cedar Ravine, Placerville
Confidence Hall	487 Main Street, Placerville
Eddy Tree Breeding Station	2480 and 2500 Carson Road, Placerville
Episcopal Church of Our Savior	2979 Coloma Street, Placerville
Fountain-Tallman Soda Works	524 Main Street, Placerville
Hattie (Gold Bug) Priest and Silver Pine Mines and Stampmill	2501 Bedford Avenue, Placerville
Heller Estate	NW of U.S. Highway 50 and CA 89 junction on N side of CA 89, South Lake Tahoe
Lombardo Ranch	1709 Carson Road, Placerville
Pearson, John, Soda Works	594 Main Street, Placerville
Pope Estate	NW of U.S. Highway 50 and CA 89 junction on N side of CA 89, South Lake Tahoe
Sugar Pine Point State Park	3 miles S of Homewood on CA 89, Homewood vicinity

TABLE 7-11**EL DORADO COUNTY RESOURCES IN BOTH THE CALIFORNIA INVENTORY OF HISTORIC RESOURCES AND CALIFORNIA STATE HISTORIC LANDMARKS LIST**

Resource Name	Location	Theme
Coloma and Marshall Gold Discovery Area	State Route 49, 9 miles north of Placerville	Economic/Industrial
Diamond Springs Townsite	Diamond Springs	Exploration/Settlement
El Dorado-Nevada House "Mud Springs" Overland Pony Express Route in California	El Dorado	Economic/Industrial
Georgetown	Main Street	Exploration/Settlement
Greenwood	Main Street	Exploration/Settlement
Moore's (Riverton)-Overland Pony Express Route in California	11 miles east of Sportsmans Hall	Economic/Industrial
Mormon Tavern-Overland Pony Express Route in California	0.5 mile west of Clarksville	Economic/Industrial
Negro Hill, Salmon Falls, Condemned Bar	Folsom Lake State Recreation Area	Exploration/Settlement
Placerville-Overland Pony Express Route	Main and Sacramento, Placerville	Exploration/Industrial
Pleasant Grove House-Overland Pony Express Route in California	Green Valley Road, 9.5 miles east of Folsom	Economic/Industrial
Sportsmans Hall-Overland Pony Express Route in California	12 miles east of Placerville	Economic/Industrial
Strawberry Valley House-Overland Pony Express Route	Strawberry	Economic/Industrial
Sugar Pine Point State Park	State Route 89, 3 miles south of Homewood	Exploration/Settlement
Websters (Sugar Loaf House)-Overland Pony Express Route in California	1 mile west of Kyburz	Economic/Industrial
Yanks Station-Overland Pony Express Route in California	Meyers	Economic/Industrial
Source: State of California Department of Parks and Recreation, State Office of Historic Preservation, California Inventory of Historic Places, March 1976, and California Historic Landmarks		

TABLE 7-12
EL DORADO COUNTY RESOURCES IN THE CALIFORNIA INVENTORY OF HISTORIC RESOURCES

Resource Name	Location	Theme
Bayley House	Pilot Hill	Economic/Industrial
Carved Tree Marker	Tragedy Springs	Exploration/Settlement
Coloma Road, Coloma	Marshall Gold Discovery State Historic Park	Economic/Industrial
Coloma Road, Rescue		Exploration/Industrial
Condemned Bar	Folsom Lake State Recreation Area	Exploration/Settlement
Dry Diggins-Old Hangtown	Bedford & Main Streets, Placerville	Exploration/Settlement
El Dorado's False Front Buildings Grange Hall Site (California's First) Hangman's Tree	El Dorado Pilot Hill 305 Main Street, Placerville	Economic/Industrial Social/Education Government
Hoboken House	Greenwood-Spanish Dry Diggins Road	Economic/Industrial
Log Barn	North Fork of Cosumnes River, Nashville	Economic/Industrial
Marshall's Blacksmith Shop	Kelsey	Economic/Industrial
Fridays Station-Overland Pony Express Route in California	Edgewood	Economic/Industrial
Marshall, (James W.) House	Tom Allen's Saloon, Kelsey	Architecture
Methodist Episcopal Church	Thompson Way, Placerville	Religion
Mormon Island	Folsom Lake State Recreation Area	Exploration/Settlement
Pilot Hill Hotel	6 miles northwest of Gibsonville, Pilot Hill	Economic/Industrial
Placerville Historic District	Crossing of U.S. Highway 50 and State Route 49	Economic/Industrial/ Settlement
Salmon Falls	Folsom Lake State Recreation Area	Exploration/Settlement
Studebaker's Shop, Site of	543 Main Street, Placerville	Economic/Industrial
Tragedy Springs	State Route 88, near Carson Pass Summit	Exploration/Settlement
Wakamatsu Tea and Silk Farm Colony	Gold Hill	Economic/Industrial
Yarnold-Tollhouse (Kyburz Hotel) U.S. Highway 50, near Sugar Loaf House	Kyburz	Economic/Industrial

Source: State of California Department of Parks and Recreation, State Office of Historic Preservation, California Inventory of Historic Places Preservation, March 1976

TABLE 7-13
EL DORADO COUNTY RESOURCES COMPILED FROM COUNTY PUBLICATIONS,
NOT INCLUDING THOSE IN STATE OR FEDERAL LISTS

Resource Name	Location	Vicinity
Green Valley Ranch House site	Green Valley Road	Western Slope
Skinner Winery	Green Valley Road	Western Slope
Zengraf House	Deer Valley Road	Western Slope
Etzel or Holden House	Deer Valley Road	Western Slope
Gold Hill	Cold Springs Road/Gold Hill Road	Western Slope
Wells Fargo Express Office	Pleasant Valley Road, El Dorado	Western Slope
Bank Store Offices	Pleasant Valley Road, El Dorado	Western Slope
Occidental Hotel Site	Pleasant Valley Road, El Dorado	Western Slope
Louis Le Pitit's Store	Diamond Springs	Western Slope
Odd Fellows Hall	Diamond Springs	Western Slope
Wells Fargo Express Office site	Diamond Springs	Western Slope
Somerset House site	Mt. Aukum Road/Grizzly Flat Road	Western Slope
Cole's Station	Grizzly Flat Road	Western Slope
Union Hotel site	Kelsey	Western Slope
Bret Harte Inn site	Pino Grande	Western Slope
Michigan-California Railroad site	Pino Grande-Chute Camp-Camino	Western Slope
Cable Point site	Pino Grande-American River	Western Slope
Pacific House	U.S. Highway 50 east of Pollock Pines	Western Slope
Whitehall	U.S. Highway 50 east of Pollock Pines	Western Slope
Fred's Place	U.S. Highway 50 east of Pollock Pines	Western Slope
Phillips Station	Stage stop, Echo Summit area	Western Slope
Newtown	Newtown Road south of Camino	Western Slope
Old Malone House	Cedarville	Western Slope
Garden Valley	Garden Valley	Western Slope
Cool	Stage stop, Cool	Western Slope
Spanish Flat	Georgetown - Kelsey	Western Slope
Logtown	Mining town, El Dorado	Western Slope
Nashville	Mining camp, Cosumnes River	Western Slope
Fairplay	Mining town, Fairplay	Western Slope
Grizzly Flat	Mining center, Grizzly Flat	Western Slope
Indian Diggins	Mining town, Omo Ranch	Western Slope

TABLE 7-13
EL DORADO COUNTY RESOURCES COMPILED FROM COUNTY PUBLICATIONS,
NOT INCLUDING THOSE IN STATE OR FEDERAL LISTS

Resource Name	Location	Vicinity
Mormon Carson Emigrant Trail	Sly Park-Pleasant Valley-El Dorado	Western Slope
Diamond - Caldor Railway	Diamond Springs	Western Slope
First County Court House site	Coloma Street	Coloma
Edwin Markham Home	Coloma Road	Coloma
Vineyard House and Winery	Cold Springs Road	Coloma
Coloma Jail site	Cold Springs Road	Coloma
Odd Fellows Hall		Coloma
General Store		Lotus
Meyers Dance Hall	Beach Court	Lotus
Old Union Town Cemetery		Lotus
Coloma Pioneer Cemetery	Cold Springs Road	Coloma
Balzer House	Wentworth Springs Road	Georgetown
Miller's Bakery site	Wentworth Springs Road	Georgetown
Georgia Slide		Georgetown
Nevada House site	Wentworth Springs Road	Georgetown
Shannon Knox House		Georgetown
Old Armory	Wentworth Springs Road	Georgetown Ditch
Company House	Wentworth Springs Road	Georgetown
Pioneer Cemetery	State Route 193	Georgetown
Bolling Saloon site		Georgetown
Masonic Hall site		Georgetown
Cary House	Main Street	Placerville
Jane Stuart Building/Roller's Home	Main Street	Placerville
Ivy House site	Main Street	Placerville
Old Zeisz Brewery site	Main Street	Placerville
Dillingers Furniture Store	Main Street	Placerville
Ab Saul's Early Day Stage Station		Smith's Flat
Bell Tower	Main and Center Streets	Placerville
Frederick Sieg Monument	Main Street	Placerville
First Organized School site	Coon Hollow	Placerville
Old City Cemetery	Rector and Chamberlain Streets	Placerville

TABLE 7-13
EL DORADO COUNTY RESOURCES COMPILED FROM COUNTY PUBLICATIONS,
NOT INCLUDING THOSE IN STATE OR FEDERAL LISTS

Resource Name	Location	Vicinity
Old Uppertown Cemetery	School Street	Placerville
Old Catholic Cemetery	Fiske Street	Placerville
Jewish Cemetery	Myrtle Avenue	Placerville
Thompson House	Ravine Street	Placerville
Bennett House	Bee Street	Placerville
Old Darlington Residence site	Cedar Ravine Road	Placerville
Geibenheim Brewery	Pacific Street extension	Placerville
Old Chinese Store site	Benham and Pacific Streets	Placerville
Pioneer Hardware Company Building		Placerville
Emigrant Trail		Lake Tahoe area
Sierra House site	Way Station	Lake tahoe area
Osgood's Toll House site	Echo Creek	Lake Tahoe area
First School House site	Wye	Lake Tahoe area
Woodburn's Mill site	Trout Creek	Lake Tahoe area
Pine Grove House site	Way Station	Lake Tahoe area
River House site	Trout Creek	Lake Tahoe area
Miller House site	Heavenly Valley Creek	Lake Tahoe area
Dixon House site	Way station	Lake Tahoe area
McCumber's House site	Ski Run Boulevard	Lake Tahoe area
Lapham's Hotel site	Stateline	Lake Tahoe area
Pott's Saloon site	U.S. Highway 50	Lake Tahoe area
First State Highway Bridge	Trout Creek	Lake Tahoe area
Celio ranch	Upper Truckee Road	Lake Tahoe area
Camp Richardson		Lake Tahoe area
Tallac Hotel site	USFS Visitor's Center	Lake Tahoe area
Cascade Lake		Lake Tahoe area
Emerald Bay		Lake Tahoe area
Meeks Bay		Lake Tahoe area
Lake Valley Railroad site	Bijou - Meyers	Lake Tahoe area

Source: El Dorado County Recreation Plan (undated) and Open Space and Conservation Element, El Dorado County 1984

OPEN SPACE RESOURCES

As defined by Government Code Section 65560(b), "open-space" includes any parcel or area of land or water which is essentially unimproved and designated as such for any one of the following reasons:

- natural resource protection (such as fish and wildlife habitats, rivers, streams, and riparian corridors);
- managed production of natural resources (including agricultural and timberlands, mineral extraction areas, and fish hatcheries);
- provision of outdoor recreation (scenic resources, historic and cultural resources, parks, and trails); or
- assurance of public health and safety (open space along flood plains, steep slopes, or any other such area that threatens the safety of structural development).

The objectives of the Open Space Element have been clearly stated by the State Legislature and are included in Government Code Section 65561:

- (a) That the preservation of open space land ... is necessary not only for the maintenance of the economy of the State, but also for the assurance of the continued availability of land for the production of food and fiber, for the enjoyment of scenic beauty, for recreation and for the use of natural resources; and
- (b) That discouraging premature and unnecessary conversion of open space land to urban uses is a matter of public interest and will be of benefit to urban dwellers because it will discourage noncontiguous development patterns which unnecessarily increase the cost of community services to community residents..."

Open space is not a land use but a characteristic of certain land use types. Its value is attributed to the fact that it is predominantly undeveloped or developed with uses that complement the inherent natural and scenic resource or that respect any potentially hazardous characteristics of the land. One of the contributors to the high quality of life in El Dorado County is the vast amount of open space land. This essential ingredient of rural living makes open space a valuable resource.

The visual and aesthetic qualities of the County, including vistas of the Sierra Nevada, panoramas of agricultural land, grazing land, forests, steep canyons, and woodlands are unique and are integral components of the tourism industry. The economy relies on open space lands for recreational activities such as camping, hiking, and hunting. A number of important open space lands are publicly owned lands regulated by Federal and State agencies. These lands include the Eldorado and Tahoe National Forests, Bureau of Land Management lands, and State parks and recreation areas.

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Chapter 8

AGRICULTURE AND FORESTRY

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Chapter 8

AGRICULTURE AND FORESTRY

AGRICULTURE

Agricultural lands, (not including timber lands), although not plentiful in El Dorado County, are considered a valuable resource on the Western Slope of the County. Agriculture lands comprise approximately 11 percent of the County's total acreage. Cattle grazing and animal husbandry were historically the primary cash products, accounting for about 44 percent of the County's agricultural value in 1988. In 1992, fruit and nut production accounted for 50 percent of the County's agricultural production value (excluding timber). High quality, agricultural lands are non-renewable resources and, thus, a valuable asset that should be carefully managed.

Beyond its economic importance, agriculture contributes to El Dorado County in other ways. Agricultural lands contribute to the rural lifestyle and sense of community enjoyed by County residents. Many factors exist which influence agricultural productivity and the preservation of agricultural lands. The following briefly highlights some of the factors which affect agriculture in El Dorado County.

- Agricultural land in El Dorado County has come under increased pressure for conversion to a non-agricultural use. This pressure occurs frequently on the best agricultural land because this is where development potential is also the greatest usually due to its close proximity to urbanizing areas and gentler topography.
- Urbanization impacts adjacent agricultural lands by rising land prices to the point they are no longer economically viable for agricultural production.
- Agricultural operations potentially adversely affect the surrounding residents due to existence of odors and flies, noise, use of pesticides, dust generated by land tilling, smoke, and problems caused by straying livestock. Residential areas also affect agricultural operations land through trespass, vandalism, roaming dogs, and nuisance complaints.
- Where the income derived from agricultural production does not provide for adequate family financial support, the incentive for the farmer to subdivide the land is increased. Once the land has been subdivided, the agricultural use is usually discontinued, or reduced to a hobby activity. Residents that replace the agricultural use are dependent on services, employment, and facilities in the community both within and beyond the County.

- High land costs make it difficult for agricultural operators to acquire more land to increase efficiencies, and high costs also make it difficult for others to enter the agricultural business and increases the incentive for the agricultural property owner to subdivide and place the property under non-agricultural use.

Soil Classifications

The principle component in the development of land use policy relating to agriculture is the soil and its suitability for agricultural production. To aid in this determination, one of the key references is a detailed survey of soil types in El Dorado County and their suitability for agricultural production based on a capability classification was published in 1974, entitled *Soil Survey of El Dorado Area, California*.

The capability system is commonly used to denote suitability and limitations of soil groups for agricultural and other types of land uses. Soil classifications range from Class I to Class VIII with soils being progressively less suited for agricultural uses the higher the classification. All soils in the County are rated as having some limitations for agricultural productivity. In addition, subclasses indicated by a single lower case letter further describe the soil resource with respect to erosion risks (e), drainage concerns (w), shallowness (s), and concerns for constrictions related to climate severity (c). All of these subclasses are relevant in El Dorado County except the subclass for climate. In general, the Western Slope of the County has agricultural limitations that result primarily from steep slopes, shallowness to bedrock, coarse fragments in the soil profile, low available water holding capacity, and rock outcrops (USDA, SCS, 1974).

A more recent classification system, the Important Farmland Inventory System, classifies land based on ten soil and climatic characteristics. This system was initiated in 1975 by the United States Department of Agriculture Soil Conservation Service (SCS) as part of a program to map the Nation's farmlands.

In 1980, the California Department of Conservation began the Farmland Mapping and Monitoring Program to supplement the SCS program. Initial State efforts were directed primarily at providing financial assistance and limited staff support to expedite completion of the maps by SCS. The State's involvement in the SCS program and continued controversy over agricultural land conversions led to passage of State legislation to inventory the State's crop and grazing lands and set up a monitoring system to document how much land was coming into or going out of agricultural production each year in California.

The Important Farmland Series maps classify land as follows:

1. Prime Farmland - Land that has the best combination of features for the production of agricultural crops.
2. Farmland of Statewide Importance - Land other than Prime Farmland that has a good combination of physical and chemical features for the production of agricultural crops.

3. Unique Farmland - Land of lesser quality soils used for the production of the State's leading agricultural cash crops.
4. Farmlands of Local Importance - Land that is of importance to the local agricultural economy.
5. Grazing Land - Land on which existing vegetation is suited to the grazing of livestock.
6. Urban and Built Up Lands - Land occupied by structures with a building density of at least one unit per one and a half acres.
7. Other Lands - Land that does not meet the criteria of any other category.
8. Land Committed to Non-agricultural Use - This includes vacant areas and existing farm and grazing land that have a permanent commitment to development.

Local jurisdictions participate in the mapping program by identifying Farmlands of Local Importance and by reporting annually on conversions of lands to or from agriculture. As part of the Agricultural Element, a map of these agricultural resources has been prepared. This mapping system is used by the County to guide its decisions affecting agricultural land.

Prime agricultural soils make up a small portion of the County's total acreage; consequently, there are relatively few areas designated Prime Farmland or Farmland of Statewide Importance. Concentrations of Unique Farmlands and Farmlands of Local Importance can be found around Cool, Gold Hill, Georgetown, and Buffalo Hill areas. Deep, good-quality soils can be found in the foothills at elevations between 1,200 to 3,500 feet providing optimum growing conditions for certain specialized crops such as apples, nectarines, peaches, plums, cherries, Christmas trees, walnuts, and varietal wine grapes. The vast majority of the Western Slope is either Grazing Land or Other Lands as defined by the Important Farmland Series.

The official Agricultural Soils Map and the criteria for defining the types of agricultural lands are on file with the County Planning Department. The "choice" agricultural lands within El Dorado County are comprised of the agricultural soils listed in Table 8-1.

TABLE 8-1
CURRENTLY RECOGNIZED CHOICE AGRICULTURAL SOILS

Prime Farmland	Statewide Importance Farmland	Unique and Local Importance Farmland		
AfB	AcC	AfC	CoE	MsC
AfB2	AcC	AfC2	DfC	ReC
ArB	BhC	AfD	DfD	SbD
CmB	DfB	AgD	DmD	SfC2
HgB	HgC	ArC	HgD	SfD2
HhC	HrC	ArD	JrC	SkC
LaB	PgB	BhD	JrD	SkD
ReB	Rk	BpC	JtC	SkE
SbB	SbC	BpD	JtD	SsC
	ScC	CkD	JvD	SsD
	SgC	CmC	MaD	SsE
	WaB	CmD	MrC	SuC
		CoC	MrD	SuD

Note: In addition to the above, other soils map units that may contain properties of Unique and Local Importance are: BkD, CiE, CrE, DgE, HkE, HtE, ImE, JsD, JtE, JuE, MbE, McE, MpB, MtE, PeD, PgB, ReD, RfC, RfD, SbE, ShD, SrE.

Above units or un-named soils must have the following criteria to qualify as Choice:

- 1) $\geq 36"$ soil depth w/ $\geq 5"$ AWC (with adequate water supply - public or well);
- 2) $\geq 60"$ soil depth w/ $7"$ AWC (dryland farming);
- 3) Thermic or mesic temperature regime;
- 4) Slope ≤ 15 percent;
- 5) Parcel size ≥ 20 Ac.;
- 6) Growing season (May 1 - Sept.30) ≥ 150 days.

Source: Soil Survey of the El Dorado Area, California, reviewed and updated June 1991 by the Soil Conservation Service.

Existing Agricultural Lands

Agricultural Acreage Land considered suitable for agriculture is found predominantly in the western half of the County due to lower elevations and better soil conditions. According to the U.S. Census of Agriculture, in 1987, 11.7 percent of the County's approximately 1,097,000 acres were devoted to farmlands. This is a 13 percent decrease from the amount of land reported for farming in 1982 when 146,644 acres were in agricultural production. Farms in the County tend to be small. The average size of the 738 farms in the County in 1987 was 174 acres.

Types of Crop Cultivation Table 8-2 shows 15 years of economic value of crops produced in the County; Table 8-3 depicts the value of specialized agricultural products produced in the County over the last 15 years. During the 1980s (comparing 1982 with 1988), the amount of agricultural production in El Dorado County fluctuated. In 1982, the total amount of production, represented by amount of sales, was \$16,077,000. In 1988, it was \$16,763,000, an overall increase but a significant drop from 1987 (\$18,197,000). Traditional agricultural crops have become more diversified now including more specialized types of production such as grapes for wine and tourist-related enterprises such as cut-your-own Christmas trees.

In the early nineties, there has been a significant increase in production values of fruits and nuts, including grapes, compensating for a drastic reduction in cattle production. The reason for the increase in grapes is related to the fact that in 1993 the County had 14 wineries that are producing high quality wines, with an additional 18 smaller vineyards in operation. The recent establishment of approximately 100 acres of "organic" farming of various crops is currently a minor aspect of agricultural production in the County but could grow in significance depending on market demand.

The cultivation of commercial Christmas trees and the roadside market businesses (ranch marketing) associated with the Apple Hill orchard area near Placerville contributes to the County's economic base by promoting seasonal tourism. Agricultural products are sold directly to the consumer as well as through customary wholesale channels.

TABLE 8-2
SPECIALIZED CROPS OF EL DORADO COUNTY (in thousands of dollars)

Year	Apples	Grapes	Walnuts	Cattle	TOTAL
1978	2,061	171	108	4,248	6,588
1979	2,374	339	133	5,923	8,769
1980	1,967	352	158	6,581	9,058
1981	2,055	472	89	7,656	10,272
1982	2,478	332	161	5,169	8,140
1983	2,779	518	68	4,195	7,560
1984	1,310	572	102	5,325	7,309
1985	4,015	627	40	4,307	8,989
1986	2,979	605	187	4,080	7,851
1987	4,138	859	104	3,647	8,748
1988	1,862	933	33	4,212	7,040
1989	5,213	1,648	49	3,424	10,334
1990	3,200	1,764	111	874	5,949
1991	4,675	2,162	123	859	7,819
1992	5,775	2,226	161	965	9,127

Source: El Dorado County Department of Agriculture, Agricultural Crop Reports, 1978 to 1992.

TABLE 8-3
EL DORADO COUNTY AGRICULTURAL PRODUCTION (in thousands of dollars)

Year	Fruits and Nuts	Animal Husbandry	Miscellaneous	Apiary	TOTAL
1978	4,901	6,143	3,286	26	14,355
1979	4,557	8,473	4,225	28	17,283
1980	4,839	9,652	3,204	40	17,735
1981	4,800	10,964	2,976	223	18,964
1982	4,928	7,464	3,350	335	16,077
1983	4,010	6,757	4,121	349	15,237
1984	3,238	8,245	4,666	481	16,630
1985	6,903	7,674	4,432	421	19,430
1986	5,088	7,460	4,681	466	17,695
1987	6,282	6,840	4,695	380	18,197
1988	4,053	7,397	5,011	244	16,763
1989	8,604	7,346	6,020	202	22,214
1990	6,140	4,400	6,715	264	17,457
1991	8,253	4,744	5,557	264	18,818
1992	9,944	3,928	5,775	253	19,990

Miscellaneous: Over 90 percent of the 1992 miscellaneous category consists of nursery production, Christmas trees, pasture and range.

Source: El Dorado County Department of Agriculture, Agricultural Crop Reports, 1978 to 1992.

Agricultural Resource Management

The County presently has three major programs for preserving agricultural lands. These include the Williamson Act, the General Plan/Zoning Ordinance, and the Irrigation Management Services Program.

The Williamson Act: The California Land Conservation Act of 1965, as amended, commonly known as the Williamson Act, is a voluntary tax incentive program for preserving agricultural and open space lands. A ten-year contract is entered into by the County and the property owner. The contract is renewed automatically each year unless it is cancelled or one party gives notice of non-renewal. The County places restrictions on the use of the land and is thereby guaranteed that the property will remain in agricultural or open space use. The property owner is guaranteed that the property will be taxed according to the income it is capable of generating from agriculture and other compatible uses rather than its full market value.

Property may be removed from a Williamson Act contract by two methods. First, a notice of non-renewal may be filed. At the end of the ten-year contract, the property will then be out of the contract. The second method is by applying for a cancellation of the Williamson Act contract. In order for the Board of Supervisors to approve a cancellation request, they must make either finding (a) or finding (b) below:

- (a) The cancellation is consistent with the purposes of the Williamson Act because:
 - (1) The cancellation is for land on which a Notice of Non-renewal has been served pursuant to Section 51245 of the Government Code.
 - (2) The cancellation is not likely to result in the removal of adjacent lands from agricultural use.
 - (3) The cancellation is for an alternative use consistent with the applicable provisions of the County General Plan.
 - (4) The cancellation will not result in discontinuous patterns of urban development.
 - (5) There is no proximate non-contracted land that is both available and suitable for the use to which it is proposed the contracted land be put or development of the contracted land would provide more contiguous patterns of urban development than development of proximate noncontracted land.
- (b) The cancellation is in the public interest because:
 - (1) Other public concerns substantially outweigh the objectives of the Williamson Act.
 - (2) There is no proximate non-contracted land that is both available and suitable for the use to which it is proposed the contract land be put or development of the contracted land would provide more contiguous patterns of urban development than development of proximate noncontracted lands.

In order to be eligible for tax benefits under the Williamson Act, the land must be located within an agricultural preserve designated by the County. Counties that participate in the Williamson Act program receive subventions from the State to offset the losses in tax revenue incurred from the placement of lands under contract.

Since Proposition 13 was passed in 1978, the adequacy of the tax incentive provided by the Williamson Act has been questioned. In 1983, a survey conducted by the California Department of Conservation of 19 counties participating in the Williamson Act program concluded that "although the Williamson Act tax incentive has been reduced by about 20 percent since passage of Proposition 13, the Act continues to offer considerable property tax advantages for owners of contracted agriculture lands." Another finding of the survey was that of all land use types

under Williamson Act contract, dry grazing land receives the largest reductions in property taxes. On an average, dry grazing receives a tax reduction of 90 percent of the Proposition 13 value while land uses such as orchards and vineyards receive a 37 percent and 31 percent reduction, respectively.

General Plan/Zoning Ordinance: The purpose of a general plan is to serve as a guide for the comprehensive, long-range development of the County. A zoning ordinance regulates, among other things, land uses, parcel sizes, and establishes setbacks between agricultural and non-agricultural uses in the County. This document can help preserve agricultural land by retaining agricultural land in economically viable parcel sizes and by allowing urban type development only within and adjacent to existing urban communities.

Agricultural lands are divided into existing and potential agricultural lands. Existing agricultural lands consist of commercially productive lands, lands under Williamson Act contract, and lands zoned Timber Preserve or Planned Agriculture. Potential agricultural lands consist of lands with prime agricultural soils, as defined by the 1974 Soil Conservation Service Soil Survey, which are zoned for greater than ten-acre minimum parcels and are not adversely affected by incompatible adjacent land uses. The El Dorado County Agricultural Commission, the Soil Conservation Service, and the County Planning Department have developed a point-based rating system for identifying potential agricultural lands on a parcel-specific basis. The rating system is referred to as the Suitability Evaluation for Agricultural Lands (SEAL).

The Agricultural District overlay land use designation has been established for purposes of conserving, protecting, and encouraging the agricultural uses of important agricultural lands and associated activities throughout the County; maintaining viable agricultural based communities; and encouraging the expansion of agricultural activities and production. Agricultural Districts have been designated on the General Plan land use map as an overlay land use designation. Lands that have been considered suitable for the Agricultural District overlay, were designated based on the following criteria: lands currently under Williamson Act contract; lands with choice soils; lands under cultivation; lands suitable for agricultural production; and lands currently under low development densities.

Agricultural zoning districts have been established for the purpose of promoting and encouraging agricultural uses by providing: 1) opportunities to increase their economic viability; and 2) protection from the encroachment of unrelated and incompatible land uses. Within these districts, the primary land use is for the raising of livestock; growing of trees, fruits, vegetables or other crops; the processing, packaging, and sales of agricultural products; and the development of one single-family home. The agriculture zoning districts are unique in that they are established based on the agricultural suitability of the land, including such criteria as soil types, existing agricultural use, and the location of the parcel in relation to surrounding land use.

Irrigation Management Services Program: Irrigation management services are provided by the El Dorado Irrigation District to commercial agriculture customers, allowing growers to conserve water yet meet the water requirements to bring fruit crops to full maturity. Weekly water depletion rates at various soil depths are measured in hundreds of locations in the County. Daily weather data are coupled with evapo-transpiration rates for the various soils; solar aspects and elevations of growers and irrigation schedules are provided to the growers. More than 2,000 acre-feet of water are saved annually when compared with earlier growing practices.

The Role of the Agricultural Commission

The Agricultural Commission is a seven member advisory body to the Planning Department, Planning Commission, and Board of Supervisors on agricultural related land use issues. The Commission is made up of a County-wide mix of agricultural industries: grapes/wineries, cattle, timber, and fruits. Its role is to make case-by-case recommendations to the hearing body regarding the protection of agricultural soils and operations. The Agricultural Commission has the primary responsibility of interpreting the Suitability Evaluation for Agricultural Lands procedure. The Agricultural Commission evaluates all aspects of Williamson Act Contracts. The Agricultural Commission advises the County on "Right to Farm" issues and complaints regarding agricultural operations. The farm advisor from the University of California Cooperative Extension Service, El Dorado County serves, as a technical advisor to the Agricultural Commission.

Agricultural Commissioners are appointed to four year terms by the chairman of the Board of Supervisors, with the approval of the entire Board of Supervisors. The members of the Agricultural Commission are composed of: one representative of forest and related industries; two representatives of the livestock industry; two representatives of the fruit and nut farming industry; one representative of the agricultural industry; and one representative of other agricultural interests. The County farm advisor and agricultural commissioner serve as *ex officio* members.

Agricultural Economy and Production

To further the productivity of agricultural activity in the County, it is important for development adjacent to agricultural lands to recognize that nuisances such as noise, odors, and chemical usage are a part of agricultural practices and production. This is true for both large- and small-scale agricultural operations. Through the enforcement of the County's "Right to Farm" ordinance, existing farmers will be protected from encroaching development, and new farmers will have fewer barriers to face when entering the field of agriculture.

Three additional strategies will assist agricultural operations. First, water, the most essential element of any agricultural activity, must be provided reliably and economically and in adequate amounts to ensure agricultural productivity. The County, water purveyors, and agricultural operators must work together to achieve the following: provide adequate amounts of irrigation water at a cost that allows agricultural operations to remain competitive; and, implement water conservation strategies. Second, housing for permanent and seasonal agricultural employees

facilitates efficient agricultural operations. It is important for farm owners and operators, the Agricultural Commission, County officials and staff, nonprofit organizations and agencies, and lending institutions to collaborate to fill this need. Thirdly, incompatible land uses should be avoided in proximity to important agricultural areas. This is accomplished through the establishment of large minimum lot sizes and setbacks for new residential uses in proximity to agricultural areas. The agricultural District overlay on the General Plan land use map is the basis for such measures.

Agricultural production is further enhanced by availability of support services. Agricultural support services, such as processing and packing services, agricultural waste handling, and veterinary clinics contribute to the productivity and efficiency of agricultural operations. These support services require convenient and accessible locations within agricultural areas to best serve agricultural operators and to support the agricultural economy and are appropriate in agriculture-designated areas.

Agriculture must be promoted as an important component of the County's economy. Successful promotion, wholesale, and ranch marketing of agricultural products grown in El Dorado County will enhance the County's image and reduce the pressure on farmers and ranchers to subdivide and convert the land to non-agricultural land uses. In addition, the Agricultural Commission should continue its role as a communicator between the agricultural operators of El Dorado County and the County government.

FORESTRY

The preservation of forest lands and the management of forest resource production are issues which are grounded not only with the residents of El Dorado County but throughout the country and the world. As with agricultural lands, forest lands have contributed to the rural lifestyle enjoyed by County residents and visitors.

El Dorado County's forest lands are highly valued for their economic contributions in terms of revenue and employment as well as for their benefits to wildlife habitat, watershed protection, erosion control, open space, scenic amenities, rangeland, and recreation. The forest lands of the County provide fuel for heat, materials for furniture, and lumber for construction.

More than one-half (546,000 acres) of El Dorado County is commercial forest land; 306,000 acres are in national forest lands; 240,000 acres are in private ownership. The commercial conifer forest lands of El Dorado County are among the most productive in the world. The oak woodlands, riparian canyons, and subalpine forests are additional important forest resource areas with high values for watershed, wildlife, recreation, aesthetics, and other purposes. These areas are not normally managed for commercial wood production. The County has recently supported efforts to develop a market for hardwood forest products.

Forest management and protection has intensified over the last half century to the present day. The development of the Comstock Lode and other early mining, agricultural, and housing needs placed heavy demand on the premium forest species of pine, fir, and cedar. The demand has continued to grow as population increases and markets expand internationally as well as nationally and locally. Public forests are under increasing pressure to serve all uses such as recreation, wildlife, aesthetics, wilderness preserves, as well as meet extractive needs. In El Dorado County, residents are aware of the many roles forest lands have in their rural lifestyle and recognize the long-term need for balancing forest land preservation, development, utilization, and production.

Development in Forest Lands

Historically, development practices largely ignored existing land features, opting instead for land clearing and large-scale grading. Forests, woodlands, and indigenous stands of trees are important natural features and need to be carefully incorporated into the land development process. Three basic problems exist in the area where an urban area encroaches into forest lands.

The first is the impact residential uses and urbanization has on timber and forestry operations. Urbanization has its primary affect by gradually annexing land containing valuable natural resources and converting it to more intensive non-forestry uses. Residential uses in proximity to timber operations generate complaints which increase costs and negatively effects long-term timber production.

Second, forest resource production practices increase noise, dust, and traffic, and have potential to reduce the quality of nearby air, water, wildlife, scenic resources, and public safety. On the opposite end, however, residential land uses require clean air and water, are intolerant of high levels of noise, dust, and traffic, and demand an assurance of public safety. Thus, where timber uses are located adjacent to non-timber uses, the potential for land use conflict is presented. If incompatible uses are allowed to concentrate in these areas, the potential for land use conflicts is greatly magnified.

Thirdly, where homes and wildland forest vegetation are intermixed in mountainous terrain, the fire risk to the forest area is increased and fire suppression strategies must be modified so that life and property receive protective priority. Forest management is compromised and the costs of management and fire protection are substantially increased.

Parcel Size and Viability of Forest Resource Production

This factor is closely related to the factors of development on forest lands. Forest lands, like agricultural lands, are, over time, divided into smaller and smaller parcels until they reach a point where the use of an individual parcel for forest resource production is no longer economically viable. Management of forest lands becomes more difficult. The subdivision of forest land for residential and other more intensive purposes removes valuable natural resources and furthers degradation of the local and regional ecosystem.

Forest Land Preservation

El Dorado County recognizes the value of its forest resources by affording protection through the use of Timberland Production Zone (TPZ) and Natural Resource (NR) land use designations. The intent of a Timberland Production Zone not only seeks to protect the integrity of forest resources but also to prevent the occurrence of adverse impacts from timber harvesting operations on adjacent non-timbering land uses.

Many existing parcels in forest areas are too small to support economically viable forest resource production. A key element in the strategy for forest land preservation is the establishment of appropriate minimum parcel sizes for forest lands and the careful review of requests for special use permits, rezonings, subdivisions, and/or general plan amendments.

Forest Production

Effective management of forest lands is an essential component of forest resources production. The national and international demand for softwood timber products is increasing. If El Dorado County's forest lands were to achieve their maximum production potential, the result could be economically beneficial to the County; however, sustained yield practices must be employed in the present to ensure environmentally stable and economically viable forest lands in the future. Through improved management practices, fire hazards may be reduced and wildlife habitat, soil, and water resources may be enhanced while continuing to allow for economic growth.

To further the productivity of forest-based activities in the County, it is important for development adjacent to or within forest lands to recognize that nuisances such as noise, dust, and increased traffic are a part of forestry practices and production. This is true for both large- and small-scale timber operations.

The mills in the County, together with the logging operators, account for 4 percent of total County employment and 70 percent of the manufacturing employment in the County (U.S. Forest Service, 1988). Substantial timber harvested in the County is milled in nearby counties.

Types and Extent of Resources: Lands typically suitable for timber production are accessible, situated on slopes less than 35 percent, and supported by productive (fertile) forest soils (U.S. Forest Service, 1988). Principal commercial species in El Dorado County are found in the coniferous forests and include, but are not limited to, sugar pine, white and red fir, Douglas fir, ponderosa pine, incense cedar, and Jeffrey pine. These species cover an area of approximately 500,000 acres, 67 percent of which is controlled by public agencies, namely the Forest Service (El Dorado County, 1984). The U.S. Forest Service manages the largest single unit of land in El Dorado County; 495,099 acres are in the Eldorado National Forest.

The inventory of commercial timber within El Dorado County is extensive -- about 10 billion board feet (Forest Service 6.4 billion, industrial forest lands 1.9 billion, non-industrial private lands 1.5 billion). An important aspect of forestry in El Dorado County is that the productive forest lands are being maintained and improved through management and protection. The latest Eldorado Forest inventory shows a substantial gain in total volume compared with earlier inventories of 10, 20, and 30 years ago. (Table 8-4). Recent bark beetle losses in white and red fir will reduce that inventory volume.

Lumber Mills: There are two major lumber mills in El Dorado County that deal with high volumes of lumber. The Michigan-California Lumber Company is located in Camino and employs approximately 320 people. Logs are retrieved from their own private land throughout the County as well as from National Forest Lands. Lumber is sold to resalers nationally and includes framing structural lumber, wood for window seals, doors, and molding stock. Wetsel-Oviatt Lumber Company is located south of U.S. Highway 50, west of Latrobe Road, and employs approximately 200 people. Logs are supplied from their own private land in Amador and El Dorado Counties and from National Forest Lands. As with the Michigan-California Company, a number of wood products are milled for national and international sale.

In addition to the two large private mills in the County, there are smaller mills as well. The El Dorado lumber mill operates in El Dorado. Pacific Southeast Forest Products operates near Diamond Springs, west of Missouri Flat Road. Substantial acreage of timber land within El Dorado County is owned by corporations that have milling facilities in nearby counties (Georgia-Pacific, Bohemia).

Amount and Value of Production: Timber production in board feet and value for El Dorado County is shown in Table 8-4. Over the past several years, annual production has been around 200,000,000 board feet. Over the same period, the value of the timber production has climbed about 50 percent.

Variations in timber production trends are the result of several factors. One factor is that the El Dorado County Agricultural Commissioner's Office may receive only partially complete timber data from the Timber Tax Division in Sacramento requiring the Agricultural Commissioner to estimate remaining timber volumes and values. The estimation may skew values by as much as \$1,000,000. Another factor is that growers and cutters may be unable to meet their contract schedule resulting in volumes different from their forecast. In addition, if market trends are such that prices are low, cutters may hold off on cutting a certain amount of board feet per year. Moreover, the Forest Service has reduced its number of new logging contracts for green timber in order to concentrate on removing beetle-infested trees in the forest which are sold at a lesser value. The Forest Service places emphasis on infested trees because they become weakened and die, pose a threat to public safety, and are a fire hazard.

TABLE 8-4
TIMBER PRODUCTION IN EL DORADO COUNTY, 1978 - 1992

Year	Board Feet ¹	Value ¹	Total Value Timber and By-products ²
1978	Not available		26,311,000
1979	Not available		31,289,000
1980	Not available		8,962,000
1981	Not available		15,473,000
1982	129,600,000	7,470,000	7,650,000
1983	144,800,000	12,371,000	12,543,000
1984	139,270,000	11,432,000	11,491,800
1985	208,950,000	14,228,000	14,345,500
1986	260,047,000	19,000,000	19,103,000
1987	198,190,000	17,000,500	17,120,900
1988	205,000,000	20,500,000	20,607,200
1989	273,973,000	29,128,000	29,246,300
1990	314,465,000	47,335,000	47,455,300
1991	182,000,000	28,900,000	29,034,500
1992	152,018,000	33,687,000	33,784,000

¹Private and Public Forests²By-products include wood sales and permits.

Source: Draft Open Space and Conservation Element, 1984.

Timber Resource Management

Timberland policy for private lands in California is influenced by the Forest Taxation Reform Act of 1976. The Forest Taxation Reform Act was established to promote "prudent and responsible forest resource management calculated to serve the public's need for timber and other forest products while giving consideration to the public's need for watershed protection, fisheries and wildlife, and recreational opportunities." To protect timberland from conversion to other uses, the Act requires cities and counties with qualifying timberland (described below) to adopt Timberland Preserve Zoning (TPZ) restricting the use of the land to timber production and other compatible open-space uses. A Timberland Preserve Zone is defined by the Act as an area that has been zoned pursuant to Government Code Section 51112 or 51113 and is devoted to and used for growing and harvesting timber and compatible uses. To put timber preserve zoning into effect, local governments must establish a Timberland Preserve Zone ordinance. The Act establishes three means by which land could be zoned TPZ.

- List A: Parcels that the County assessor had previously assessed for growing and harvesting timber as the highest and best use of the land;
- List B: Parcels that appeared to constitute timberland but had been previously assessed for some other use. The Board of Supervisors has discretion to add or delete properties from this list; and
- List C: Application of property owner: Land owners apply to the County, and the governing body must zone the parcels if they meet the requirements of the TPZ zoning ordinance.

The Forest Taxation Reform Act lists five compatible uses that must be included in the list of compatible uses in the local ordinance:

- management for watershed;
- management for fish and wildlife or hunting and fishing;
- uses related to the growing, harvesting, processing of forest products, including but not limited to roads, log landings, and log storage areas;
- the construction, alteration or maintenance of gas, electric, water, or communication transmission facilities; and
- grazing.

According to Government Code Section 51115, "parcels zoned as timberland preserve shall be zoned so as to restrict their use to growing and harvesting timber and to compatible uses and shall be entered as a timber preserve element of the County General Plan." However, a separate timber preserve element is not required. Those parts of the General Plan dealing with timberland (land use, open space, and conservation elements) can be amended to incorporate goals, objectives, and policies for the long-term protection of timberland consistent with the policies of the Act.

Timberland Preserve Zones in El Dorado County

In El Dorado County, timber preserves are defined for 135,000 acres, or nearly 12 percent of the total available land in El Dorado County (El Dorado County, 1984). Timber preserve parcels exist in the central section of the County and extend eastward toward the Sierra Nevada Mountains. The majority of the parcels are included on List A which are those parcels the County Assessor had previously assessed for growing and harvesting timber as the highest and best use of the land. Fewer parcels are on List B and are found mainly in the south central portion of the County, as well as scattered areas to the east. List C parcels are least represented in El Dorado County and are located primarily in the north central portion of the County. A "Timber Preserves" map is maintained by the County at the County Surveyor's Office.

Forest Research

El Dorado County's forest resource, with its favorable climate, excellent forest soils, and location have attracted major forest research and operational facilities to be located in the County.

The U.S. Forest Service Institute of Forest Genetics, located in Placerville, is world renowned for its collection of pine seeds and as a center for forest genetics research. In 1990, the U.S. Forest Service established the Center for Conservation of Genetic Diversity at the institution. The Placerville Forest Nursery is a major tree-production facility, producing 15 million trees per year, and is also home of the National Electrophoresis Laboratory and Sugar Pine Rust Resistance centers for the U.S. Forest Service. The University of California, at Berkeley, owns and operates a forest research station at Blodgett Forest located east of Georgetown. These are significant forest employment activities that annually attract visitors from around the world.

El Dorado County's "Community Stability" Statement

El Dorado County's "Community Stability" Statement, as it relates to the Eldorado National Forest Timber Management Plan, is as follows:

The Eldorado National Forest makes up approximately 57 percent of El Dorado County. Federal legislation influences our economic stability which has long been a part of El Dorado County's history. The National Forest system was created in 1897 by the Organic Administrative Act which brought fire suppression and the harvesting of timber under a management plan for the first time in El Dorado County. In 1908, the Twenty-Five Percent Fund Act provided that 25 percent of the revenues generated from the national forests are returned to state and county governments.

California Government Code 29484 provides that monies received by the State from the Forest Service shall be distributed with 50 percent going to schools and 50 percent going to County roads. El Dorado County has been receiving revenues for over 85 years and has come to depend on these revenues. Since 1989, El Dorado County has received approximately 13 million dollars.

El Dorado County schools have a tremendous economic interest in ensuring that a sustainable yield for commodities occurs within the Eldorado National Forest. The funding received by schools throughout El Dorado County represents approximately two percent of their annual budgets. This funding amount is comparable to approximately one-half of all instructional materials and textbooks purchased for students in El Dorado County. During the late 1980s and early 1990s, this amounted to approximately two million dollars annually. The following chart reflects the actual amounts received by El Dorado County schools:

District	Total Revenue 1989 - 1993
Black Oak Mine Unified	\$ 680,433
Buckeye Union Elementary	927,597
Camino Union Elementary	193,441
El Dorado Union High School	1,503,430
Gold Oak Union Elementary	314,494
Gold Trail Union Elementary	216,477
Indian Diggins Elementary	10,957
Lake Tahoe Unified	1,678,580
Latrobe Elementary	46,859
Mother Lode Union Elementary	601,773
Pioneer Union Elementary	230,274
Placerville Union Elementary	496,395
Pollock Pines Elementary	391,950
Rescue Union Elementary	735,571
Silver Fork Elementary	10,517
Unduplicated SOS Programs	1,513,768
Sub-Total	\$ 9,748,988
Lake Tahoe Community College	316,259
Sierra College	17,107
Tahoe Truckee	34,185
Grand Total	\$10,116,239

El Dorado County depends on a sustainable forest yield in the Eldorado National Forest. The El Dorado County Department of Transportation receives funding from this source that represents more than 30 percent of the County's road maintenance program. For over 85 years, El Dorado County has depended on this funding source. During the five-year period, fiscal year 1989-90 through 1993-94, the average annual expenditure for road maintenance purposes has been \$6.5 million. The average amount over these same years coming in from Eldorado National Forest was 2.1 million dollars.

Over the past six years, the following amounts were received by El Dorado County Department of Transportation:

1989-90	\$2,038,927
1990-91	2,010,720
1991-92	1,924,747
1992-93	1,935,169
1993-94	2,206,676
1994-95	2,724,950
AVERAGE ANNUAL AMOUNT (\$2.1 million)	

The volume of timber harvested off the Eldorado National Forest has a direct economic impact on El Dorado County businesses and work force. The Eldorado National Forest annually grows over 200 million board feet. Over the last few decades, the Eldorado National Forest has annually harvested 137 million board feet.

Fiscal Year	Total Growth (MBF)	Total Harvest (MBF)
1985	200,000	118,819
1986	200,000	144,008
1987	200,000	214,550
1988	200,000	140,374
1989	200,000	189,508
1990	200,000	186,367
1991	200,000	167,853
1992	200,000	144,457
1993	200,000	97,400
1994	200,000	87,104
1995	200,000	6,707
Total Amounts	2,000,000	1,490,440
Total growth in timber inventory after harvest: 509,560 MBF		

During many of these years, droughts occurred that required intense accelerated timber harvest salvage sales. The Eldorado National Forest received national awards for their successful salvage timber harvest program.

The annual labor income generated as a result of the timber industry within El Dorado County is estimated at 30,911,400 dollars. This is 3.7 percent of the total annual earnings of El Dorado County workers. The timber industry within El Dorado County directly provides an estimated 1,260 jobs.

As demonstrated, the income to employees dependent on El Dorado County forest is significant. The following information depicts how the 30,911,400 dollars is spent.

13.62%	Tax	4,210,133
31.51%	Housing	9,740,182
13.19%	Grocery	4,077,214
4.54%	Clothing	1,403,378
2.87%	Health Care	887,157
8.26%	Insurance	2,553,282
14.00%	Car and Gas	4,327,596
4.45%	Entertainment	1,375,567
7.56%	Other	2,336,902
100.00%		30,911,400

Community stability is dependent on many factors. The number one factor is policy consistency. Starting with this year, 1995, El Dorado County will not be receiving the traditional annual funds because of a major policy shift from multiple use to ecosystem management by the Federal government.

Once community stability has been defined by the people in the locality, there are opportunities available to County governments to assert and protect local tax bases and economics dependent upon the use of natural resources on the Federal lands. One of these ways is through involvement in Federal land use planning. After policies, goals, and objectives have been identified as a County, the Federal government has to coordinate with local jurisdictions.

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Chapter 9

PARKS AND RECREATION

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Chapter 9

PARKS AND RECREATION

OVERVIEW

Because of its range of climates, vegetation, and topography, El Dorado County offers a wide variety of recreation opportunities for all seasons. The County contains 1,805 square miles, more than half of which are in public ownership in the form of national forests and various other parks and recreation areas. In addition, there are a variety of privately owned timberlands, parks, campgrounds, and other recreational facilities. The County supports a wide range of recreation activities including but not limited to: sightseeing, camping, hiking, bicycling, picnicking, district/community organized recreation programs and sports leagues, hunting, watersports, fishing, horseback riding, downhill skiing, cross-country skiing, and off-road vehicle travel.

The most well-known recreation areas include the beautiful Lake Tahoe Basin, known for its water and snow sports; the history and sites of the Gold Country; the Eldorado National Forest, with its many lakes and camping opportunities; and Lake Folsom. Streams, rivers, natural lakes, and artificial reservoirs provide important opportunities for a substantial share of the recreation activities. Visitors to these water resources enjoy whitewater rafting, sailboating, swimming, water skiing, windsurfing, fishing, and other forms of recreation.

El Dorado is California's original "Gold Rush" County, the site of the famous strike that started the celebrated rush of 1849. The history and traditions of the "Gold Rush Era" are an integral part of the unique character of the County. Numerous attractions, parks, and events celebrate the heritage of the area and provide important recreation opportunities and destinations for residents and tourists.

In the following sections of this chapter, the organization and administration of the Parks and Recreation branch of El Dorado County will be discussed. Next, the major recreation providers and facilities will be described. A discussion of the relationship between recreation and tourism and a description of particular sites of interest to visitors will follow. Finally, a general description and analysis of the use of recreation features within the County, future demand for additional facilities, and the economic importance of recreation will be discussed.

County parks and recreation facilities are overseen by the Parks and Recreation Division of the General Services Department. The Parks and Recreation Division (PRD) was created in 1986 to establish a comprehensive system of regional parks, recreation facilities and trails in accordance with adopted plan elements, to serve the citizens of the County, and enhance their

quality of life. The primary responsibilities of the PRD are: to establish a regional trail system throughout the County, regulate and manage the use of the South Fork of the American River, and create and maintain regional and community parks to serve residents on the Western and Eastern Slopes.

The Parks and Recreation Division in conjunction with the Planning Department is responsible for maintaining and implementing the following:

- Bikeway Master Plan, adopted 1979;
- River Management Plan, South Fork of the American River, adopted 1984 and amended in 1988; and
- Hiking and Equestrian Trails Master Plan, El Dorado County, adopted in 1989, and amended in 1990.

Recreation Commissions and Committees

The Parks and Recreation Commission currently advises the staff and the County Board of Supervisors. This Commission was established over 20 years ago as the County's park and recreation policy advisory group. The Commission is currently responsible for helping establish a regional park system that would include regional parks for the Eastern and Western Slopes, specialized recreation facilities, and a trails system in El Dorado County.

In 1992, the Board of Supervisors consolidated the four West Slope County Service Areas. CSA 3, the Tahoe Basin Service Area, was left as a separate entity to focus on providing parks and recreation facilities for the Eastern Slope residents. The Georgetown Divide Recreation District was formed in 1990 to provide focused parks and recreation services to the Divide area.

Two committees were also created to deal with particular recreation issues in the County. These are the Trails Advisory Committee and the River Management Advisory Committee. The Trails Advisory Committee began in 1975 and was established by the County Board of Supervisors to prepare a biking, hiking, and equestrian master plan. The Hiking and Equestrian Trails Master Plan adopted in 1989 was an outgrowth of that initial effort. The Trails Advisory Committee is currently charged with the mission of implementing the adopted Master Plan. The Committee is a subcommittee of the Parks and Recreation Commission. The River Management Advisory Committee was established in 1983 by the Board of Supervisors and more formally established in 1987 to be a forum and advisory body concerned with the many issues associated with the use and management of the South Fork of the American River. The River Management Advisory Committee is also a subcommittee of the Parks and Recreation Commission.

Recreation Providers

Within El Dorado County, Federal, State, County, city, local districts and private concerns combine to provide a wide range of recreational facilities and opportunities for public use. As of March 1991, Table 9-1 provides a list of the parks and recreation areas available in El Dorado County, their general locations, and the types of activities available or proposed at each particular site. The table is organized by recreation provider. Except for golf clubs open to the public and ski resorts, privately operated recreation facilities generally are not included in Table 9-1. The general distribution of the parks and recreation areas and hiking and equestrian trails is shown on a large-scale map available at the County Planning Office.

TABLE 9-1: EL DORADO COUNTY PARKS AND RECREATION AREAS

Map No.	Recreation Site/Area	Provider/ Operator	General Location	Acres	Trails	Fishing	Boating	Swimming	Camping	Picnic	Group Picnic	Meeting Room	Playground	Field	Fee	Other
1	County Fairgrounds/Walker Field	El Dorado County	Placerville	54						x	x	x	x			Fairgrounds, exhibition buildings, sports field
2	Finnon Lake	"	Finnon Lake	117	x	L	x	x	x							Horseback riding
3	Henningsen/Lotus Park	"	Lotus	40					F			F	F			Under construction
4	Piedmont Park	"	Diamond Springs	3					F				F			
5	Golden Bear	"	South Lake Tahoe	410	F				F	F	F	F	F	F		47 acres of developed recreation area, owned by USFS
6	El Dorado Trail	"		64	x											8 miles between Placerville/Camino
7	Miller High School / Joint Use	"	South Shingle Springs Road/Latrobe Road	1								x				Baseball/soccer field
8	Veerkamp Ranch	"	Green Valley/ Missouri Flat Road	13				F					F			Proposed
9	Pioneer Park	"	Gray's Corner	23							F		F			Under construction
10	Shingle Springs Park	"	Shingle Springs	1							x					
11	Ponderosa High School / Joint Use	"	Ponderosa High School	2										x		Soccer
12	Sly Park Recreation Area	EID	Pollock Pines	2,000	x	x	L		x	x	x				x	Historical sites, watersports equestrian campground
13	Texas Hill	"	Diamond Springs	N/A												Proposed reservoir, undeveloped

L: Boat Launch D: Dock F: Future N/A: Not Available

TABLE 9-1: EL DORADO COUNTY PARKS AND RECREATION AREAS

Map No.	Recreation Site/Area	Provider/ Operator	General Location	Acres	Trails	Fishing	Boating	Swimming	Camping	Picnic	Group Picnic	Meeting Room	Playground	Field	Fee	Other
14	Bass Lake	EID	El Dorado Hills	70												Unimproved
15	Cameron Park Lake	Cameron Park Community Services District	Cambridge Road	53	x		L	x	x			x		x		Boat rentals, tennis, volleyball
16	Hacienda	"	Cameron Park Drive	5	x				x			x				Par course
17	Gateway	"	Cambridge Road	13	x											Greenbelt
18	Cameron Woods	"	Mira Loma	10					x				x	x		Fee for use of ballfields
19	Sandpiper	"	Bass Lake Road	2												Nature area
20	Knollwood	"	Knollwood Road	7												Nature area
21	Royal Oaks	"	Country Club Drive	10	x							x				
22	Bonanza	"	Cameron Park	14												Unimproved
23	Christa McAuliffe	"	Merrychase Road	5				F	F					F		
24	Community Center	"	Country Club Drive	7							F					Future community center/library
25	Welsberg	El Dorado Hills Community Services District	Francisco Drive	5	x				x	x						
26	Bertelesen	"	Arrowhead Road	11				x	x	x		x	x			Snack bar
27	St. Andrews	"	El Dorado Hills Boulevard	5					x	x		x				

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TABLE 9-1: EL DORADO COUNTY PARKS AND RECREATION AREAS

Map No.	Recreation Site/Area	Provider/ Operator	General Location	Acres	Trails	Fishing	Boating	Swimming	Camping	Picnic	Group Picnic	Meeting Room	Playground	Field	Fee	Other
28	Ridgeview	EDHCSD	Ridgeview Drive	4						x	x		x			
29	Brooks School / Joint Use	"	Lassen Lane	10								x				Gymnasium
30	Oak Ridge High School / Joint Use	"	Harvard Way	10										x		Tennis
31	Tennis Court Park	"	Tam O'Shanter Road	5						x			x	x		Tennis, par course
32	El Dorado Hills Community Park	"	El Dorado Hills	40	x	F		F		x	F	x	x	x		Volleyball, tennis, gymnasium, basketball, programs
33	Park View Heights	"	Governor Drive	1						x	x		x	x		Basketball
34	Governor's Ponds	"	Governor Drive	2	x	x				x						Native wetland habitat
35	Marina Village	"	Marina Village	12	F					F	F		F	F		Unimproved
36	Green Valley Hills	"	Cedarlane Court	1						F	F		F			Unimproved
37	Powerline Open Space	"	West of El Dorado Hills Boulevard	5	F											Unimproved
38	Windsor Point	"	Frandsen Drive	1						F	F		F			Unimproved
39	Fairchild Village	"	Fairchild Drive	3						F	F		F	F		Unimproved
40	Highlands View	"	Loch Way	4						F	F		F	F		Unimproved
41	Governors West Open Space	"	Queen Mary Court	13												Open Space
42	New York Creek Nature Area	"	New York Creek	21	x											Nature Area

TABLE 9-1: EL DORADO COUNTY PARKS AND RECREATION AREAS

Map No.	Recreation Site/Area	Provider/ Operator	General Location	Acres	Trails	Fishing	Boating	Swimming	Camping	Picnic	Group Picnic	Meeting Room	Playground	Field	Fee	Other
43	Fairchild Village Open Space	EDHCSD	West of Silva Valley	16	F									F		Unimproved
44	Fairchild Village Archaeology Site	"	Fairchild Drive	1	F											Unimproved, Indian mortar site
45	Governors West Park	"	Atiyee Court	1						F	F					Unimproved
46	Waterford Park	"	Stratford Drive	1						F	F		F			Unimproved
47	Ridgeview #7 Park	"	Powers Drive	1						F			F			Unimproved
48	Southpointe II Park	"	Vista Del Lago Circle	1						F	F		F			Unimproved
49	El Dorado Hills Golf Course	Private	El Dorado Hills	150												Golf, open to public
50	Georgetown Park	Georgetown Divide Recreation District	South Street Georgetown	1	x					x			x			
51	Beam Field	"	Wentworth Springs Road, Georgetown	4									x	x		Equipment building, snack bar
52	Garden Valley	"	Garden Valley	4						x			x			Horseshoes, stage
53	Greenwood	"	Greenwood	35	F		F				F	F				Planned for regional park, community center, owned by BLM
54	Airport Park	"	Georgetown Airport	N/A	F					F						Proposed
55	Pilot Hill	"	Pilot Hill	9	F									F		Historic Bayley House

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TABLE 9-1: EL DORADO COUNTY PARKS AND RECREATION AREAS

Map No.	Recreation Site/Area	Provider/ Operator	General Location	Acres	Trails	Fishing	Boating	Swimming	Camping	Picnic	Group Picnic	Meeting Room	Playground	Field	Fee	Other
56	Walton Lake	GDPUD	Georgetown	10		x				x						Owned by GDPUD
57	Town Hall	Placerville Recreation Department	Main Street	1							x					Banquet facilities available
58	City Park	"	Pacific Street	4				x		x	x	x				
59	Rotary Park	"	Clark Street	5						x		x	x			
60	Lions Park	"	Cedar Ravine	24	x					x	x	x	x			
61	Lumsden Park	"	Wiltze Road	5		x				x		x				
62	Gold Bug	"	Bedford Road	62	x					x						Goldmine and stampmill tours
63	Bennet	"	Canal Street	10	x									x		Tennis, track
64	Sierra Golf and Country Club	Private	Placerville	18												Golf, open to public
65	Tallac Lagoon	South Lake Tahoe Recreation Department	Texas Street Tahoe Valley	10												Nature Park
66	El Dorado Recreation Area	"	Highway 50	5	x		L	x	x		x				x	Adjacent to recreation complex, campground, library
67	Barton Ski Beach	"	Highway 50	4				x								

TABLE 9-1: EL DORADO COUNTY PARKS AND RECREATION AREAS

Map No.	Recreation Site/Area	Provider/Operator	General Location	Acres	Trails	Fishing	Boating	Swimming	Camping	Picnic	Group Picnic	Meeting Room	Playground	Field	Fee	Other
68	Recreation Complex	SLTRD	Rufus Allen Boulevard	10	x			x	x	x	x	x				Gym, community center, pool, adjacent to recreation area
69	Lake Christopher	"	Pioneer Trail	187												Natural meadow, lake
70	St. Francis of the Woods	"	Highway 89	1								F				Mini park
71	El Dorado Beach	"	Lakeview Avenue	6	F	x	L	x	x	x						Bike trail
72	Aspen Grove	"	Ski Run/Pioneer Trail	5												Open Space
73	Scout Hall	"	Rufus Allen Boulevard	3							x	x				Child care
74	Regan Beach	"	Lakeview Avenue	6	x	x			x	x		x				Accessible to handicapped; snack bar, volleyball, viewing platform
75	Mike Ryan	"	D Street	2												Unimproved
76	Highland Woods	"	Highland Woods	24												Natural meadow
77	Bijou Golf Course	"	Fairway Boulevard/ Highway 50	118	x										x	Golf, pro shop, x-country skiing
78	Bijou Park	"	Al Tahoe Road	35								x				Unimproved
79	Connelly Beach	"	Timber Cove	2				x	x	x						
80	Middle School / Joint Use	"	Lyons Avenue	10										x		Tennis courts
81	Al Tahoe School / Joint Use	"	Lyons Avenue	4										x		
82	High School / Joint Use	"	Gardner Mountain Road	12										x		Tennis courts, ski mountain

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Map No.	Recreation Site/Area	Provider/Operator	General Location	Acres	Trails	Fishing	Boating	Swimming	Camping	Picnic	Group Picnic	Meeting Room	Playground	Field	Fee	Other
83	Bijou School / Joint Use	SLTRD	Spruce Avenue	6								x	x			Lighted field, gym
84	EDC Campgrounds	"	Lake Tahoe Boulevard	37	x			x	x						x	
85	Cove East	"	Tahoe Keys Marina	N/A	x		x		x							Beach access
86	Tahoe Paradise Resort	Tahoe Paradise Resort Improvement District	Meyers/San Bernardino Avenue	60	x		x		x	x		x	x	x		Lake, tennis, annual fee
87	Lake Tahoe Country Club	Private	Highway 50	150												Golf, open to the public
88	Forebay	PG&E	Pollock Pines	30	x	x			x							Day use
89	Silver Lake West	"	Silver Lake	15	x	x		x	x						x	Near a boat launch
90	Heavenly Valley	Private	South Lake Tahoe	4,200	x											Ski resort, partially on National Forest land
91	Sierra Ski Ranch	"	Echo Summit	1,500	x											Ski resort, partially on National Forest land
92	Kirkwood	"	Route 88	3,000	x											Ski resort, partially on National Forest land
93	Iron Mountain	"	Route 88	1,100	x							x				Ski resort, partially on National Forest land
94	Fallen Leaf Campground	Federal	Fallen Leaf Lake	N/A					x						x	
95	Tallac Historical Site	"	Lake Tahoe	N/A	x											Museum, visitors center

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Map No.	Recreation Site/Area	Provider/ Operator	General Location	Acres	Trails	Fishing	Boating	Swimming	Camping	Picnic	Group	Picnic Meeting	Room	Playground	Field	Fee	Other
96	Meeks Bay Beach Campground	Federal	Meeks	N/A				x									
97	Bayview Campground	"	Emerald Bay	N/A	x			x									
98	Inspiration Point	"	Emerald Bay	N/A					x								Day use, vista point
99	Eagle Falls	"	Emerald Bay	N/A	x				x								
100	Summer Homes Tract	"	Echo Lake	N/A		x		x	x								
101	Echo Chalet	"	Echo Lake	N/A													Resort
102	Kirkwood Campground	"	Kirkwood	2	x	x	x	x								x	No motorboats
103	Baldwin Beach	"	Lake Tahoe	N/A		x		x	x							x	
104	Pope Beach	"	Lake Tahoe	N/A		x		x	x							x	
105	Kiva Beach	"	Lake Tahoe	N/A		x		x	x								
106	Loon Lake Campground	"	Loon Lake	12	x	x	L	x	x	x						x	
107	Pleasant Campground	"	Loon Lake	4	x	x	L	x	x								Boat access
108	Wentworth Springs Campground		Wentworth Springs	2	x	x		x	x								
109	Silver Creek Campground	"	Silver Creek Area	2		x		x	x								
110	Ice House Campground	"	Ice House Reservoir	31	x	x	L	x	x	x						x	Handicapped facilities
111	Tragedy Springs Picnic	"	Silver Lake Area	1					x								Historical site

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Map No.	Recreation Site/Area	Provider/ Operator	General Location	Acres	Trails	Fishing	Boating	Swimming	Camping	Picnic	Group Picnic	Meeting Room	Playground	Field	Fee	Other
112	Stumpy Meadows Campground	Federal	Stumpy Meadows Lake	27	x	x	L		x	x				x	x	
113	Black Oak Group	"	Stumpy Meadows Lake	27	x	x	L		x					x		Group camping
114	Cove Overflow	"	Stumpy Meadows Lake	6		x	x		x	x				x		Overflow camp site
115	Bear Creek Picnic	"	Spanish Hill	2						x						
116	Sunset Campground	"	Union Valley Reservoir	59		x	L	x	x						x	
117	Wench Creek Campground	"	Union Valley Reservoir	34	x	x	L	x	x					x		Group camping
118	Fashoda Picnic	"	Union Valley Reservoir	14		x	L	x	F	x						Converted to camping in 1992
119	Yellowjacket Campground	"	Union Valley Reservoir	14		x	L	x	x						x	
120	Big Hill Picnic	"	Union Valley Reservoir	1	x					x						Vista Point
121	South Fork Campground	"	South Fork Rubicon River	6		x			x							
122	Gerle Creek Campground	"	Gerle Creek Reservoir	17	x	x	L	x	x						x	
123	Bridal Veil Picnic	"	South Fork American River	10		x		x		x						
124	Cleveland Corral	"	Crystal Basin	2						x						Information station
125	Lovers Leap Campground	"	Strawberry	5					x							Base camp for rock climbers
126	Digger Indian Springs Picnic	"	South Fork American River	2		x		x		x						

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Map No.	Recreation Site/Area	Provider/ Operator	General Location	Acres	Trails	Fishing	Boating	Swimming	Camping	Picnic	Group Picnic	Meeting Room	Playground	Field	Fee	Other
127	Sand Flat Campground	Federal	South Fork American River	5	x			x	x						x	
128	China Flat Campground	"	South Fork American River	9	x	x		x	x	x					x	
129	Silver Fork Campground	"	South Fork American River	12	x	x		x	x						x	Handicapped facilities
130	Eagle Rock Picnic	"	South Fork American River	8		x		x		x						
131	Wrights Lake Campground	"	Wrights Lake	30	x	x	x	x	x	x					x	No motor boats
132	42 Milestone Picnic	"	42 Milestone	1		x				x						
133	PI PI Campground	"	Middle Fork Cosumnes River	43		x		x	x	x					x	Handicapped facilities
134	Capps Crossing Campground	"	North Fork Cosumnes River	5	x	x			x							
135	Sawmill Pond	"	Lake Tahoe Boulevard	N/A	x	x				x						Designated youth fishing only
136	Folsom Lake State Recreation Area	State	Folsom Lake	17,718	x	x	L	x	x	x			x			Marina at Brown's Ravine, on-boat camping, boat-in camps, stable
137	Sugar Pine Point State Recreation Area	"	Tahoma	2,011	x	x		x	x	x					x	Nature center, Ehrman Mansion, boat exhibit
138	D.L. Bliss State Park	"	Lake Tahoe	1,237	x	x		x	x	x					x	

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Map No.	Recreation Site/Area	Provider/ Operator	General Location	Acres	Trails	Fishing	Boating	Swimming	Camping	Picnic	Group Picnic	Meeting Room	Playground	Field	Fee	Other
139	Emerald Bay State Park	State	Lake Tahoe	593	x	x	D	x	x	x					x	Vikingsholm historic house, boat-in campsites
140	Lake Valley State Recreation Area	"	Meyers	150	x				x							Golf, snow mobile rental, country club, x-country ski center
141	Washoe Meadows State Park	"	Meyers	620	x											Unimproved
142	Auburn State Recreation Area	"	Cool	42,000	x	x	L	x	x	x						Primitive camping, boat-in camps
143	Marshall Gold Discovery State Historic Park	"	Coloma	265	x		L	x	x	x					x	Disabled access, 27 historical structures, museum, visitor center

RECREATION PROVIDERS AND FACILITIES

The U.S. Forest Service, an agency of the U.S. Department of Agriculture, manages the majority of the Federal recreation sites in the County. These facilities tend to be large and are managed and operated for the benefit of the public. Recreation experiences on lands maintained by the U.S. Forest Service generally involve activities that are resource-related, such as hiking, camping, swimming, or boating. In the Desolation Wilderness Area for example, development is restricted to trails and a few water improvements; recreation uses are all related to the enjoyment of the land in its natural state.

Another Federal agency, the Bureau of Land Management (BLM), a division of the Department of the Interior, owns land in El Dorado County that is available for dispersed recreation including camping (subject to a use permit). The BLM has one developed recreation site within the County called the Dave Moore Nature Area (Parcel "E") which is located on State Route 49 and near the South Fork of the American River. Primitive camping and hiking occurs on sites owned by the BLM and along the river. There is relatively poor access to most BLM sites.

Parks and recreation areas operated by the California Department of Parks and Recreation tend to be smaller than the national recreation areas. Although visitors travel from all over the State and even the nation to visit the State parks, most visitors live one to three hours away. Many visitors may include a visit to a State park in the context of their extended vacation. For example, many people visit the historic Vikingsholm summer house at Emerald Bay State Park as part of their vacation in the Lake Tahoe area. State parks are generally organized around a particular resource such as a lake or reservoir (e.g., Folsom Lake and Lake Tahoe) or a historical resource such as the structures and relics of the Gold Rush Era at Marshall Gold Discovery State Historic Park.

Regional park facilities operated by El Dorado County, the El Dorado Irrigation District (EID), PG&E, and service districts providing recreation, are generally smaller in size and have a large percentage of space devoted to developed recreation amenities such as pools, courts, meeting rooms, playing fields, and playground equipment. These park facilities are developed to satisfy the recreational needs of the people residing in El Dorado County. Placerville and the City of South Lake Tahoe, the two incorporated cities in El Dorado County, also operate park and recreation facilities as do the two Community Service Districts of Cameron Park and El Dorado Hills and the recreation district of the Georgetown Divide. Their facilities are typically developed for high-intensity/programmed recreation use.

The following section provides a brief description of the major public operators and existing and proposed parks and recreation facilities in El Dorado County.

U.S. Forest Service - Eldorado National Forest

The U.S. Forest Service is responsible for managing the Eldorado National Forest and portions of the Lake Tahoe Basin Management Unit.

The following information on the Eldorado National Forest is derived from the Eldorado National Forest Land and Resource Management Plan of 1988. The largest designated recreation area in El Dorado County is the Eldorado National Forest, managed by the U.S. Forest Service. The majority of the forest, 417,448 acres out of 596,724 acres, is located in El Dorado County. A variety of recreational opportunities exist within the forest including primitive and developed camping, alpine and downhill skiing, picnic areas, camps managed by various organizations, hiking, equestrian trails, fishing, hunting, hang gliding, second homes, and off-road vehicle use. Because of the natural attractions, closeness to large population centers, and a well-developed internal road system, the forest receives heavy use and is consistently rated one of the most visited forests in the Country.

Recreational opportunities within the forest are divided into two types: developed and dispersed. Developed recreation facilities provide for recreation use related to features such as reservoirs, campgrounds, beaches, picnic areas, and interpretive sites. While driving for pleasure registers the highest number of visitors, family camping, winter sports, and recreation residence use are also popular developed recreation choices (USFS, 1988). Dispersed recreation opportunities take place outside of developed recreation areas and are generally less intensive. Hunting, fishing, hiking, cross-country skiing, snow play, recreation vehicle travel, boating, and undeveloped site camping are familiar dispersed forms of recreation.

Following are brief descriptions of two important recreation facilities provided by the U.S. Forest Service: trails and camping grounds. In addition, specific areas of the forest are discussed in terms of their recreational opportunities and potential.

Trails

One of the most important recreation resources in the Eldorado Forest is the trail system. There are several hundred miles of trail within the Forest. In fact, most of the existing trails in the County pass through public land. The major existing trails in the forest include: the Pacific Crest Trail, the Emigrant Summit National Recreation Trail, and the Western States Trail. Following is a brief description of the trail routes.

Pacific Crest Trail. The Pacific Crest Trail (PCT) was established in 1968 as part of the National System of Recreational and Scenic Trails. The PCT extends 2,600 miles from Canada to Mexico and passes through 23 National forests, several National parks, other Federal lands, and numerous portions of State, County, and private lands. Elevations of the segment of the PCT within the Eldorado Forest range from 7,000 to 9,000 feet. Twenty-eight miles of the PCT are in El Dorado County.

The Pacific Crest Trail enters El Dorado County from Placer County to the north; east of Sourdough Hill and south of Richardson Lake it enters Desolation Wilderness Area. The trail passes by Middle Velma Lake, Upper Velma Lake, Fontanillis Lake, Dicks Lake, Gilmore Lake, Susie Lake, Lake Aloha, Tamarack Lake, Upper Echo Lake, and Lower Echo Lake.

After crossing the community of Echo Lake and U.S. Highway 50, the PCT passes through the Echo Summit Ski Area then proceeds southerly to Benwood Meadows, Bryan Meadow, and Showers Lake. The trail continues south and that portion of the trail called the Rim Trail continues north toward Round Lake.

Mormon-Carson National Historic Trail. A portion of the Emigrant Summit National Recreation Trail, the Mormon-Carson National Historic Trail follows the general alignment corresponding to the primary Mormon-Carson Trail opened as a route for wagons eastward from Pleasant Valley in July/August of 1848. West of Pleasant Valley, the trail was used as a route to Sutter's Fort in 1849 and 1850. This is essentially the route that is being considered for inclusion as a National Historic Trail pending Federal legislation AB-2800. In some locations, the historical accuracy of this trail may have to vary if it is to be used as a continuously functioning trail.

The Mormon-Carson Trail stretches 58 miles through the length of El Dorado County. From Sacramento County, the Mormon-Carson National Historic Trail essentially follows White Rock Road. At Silva Valley Road, the trail would either have to proceed to the north side of U.S. Highway 50 and cross private property to Bass Lake Road or similarly cross private property on the south side of U.S. Highway 50 to connect to Bass Lake Road. From Bass Lake Road, the trail would most likely follow Country Club Drive to Cameron Park Drive where it would extend easterly along Durock Road and Pleasant Valley Road through the towns of El Dorado and Diamond Springs. The Historic Trail route then bypasses Pleasant Valley Road to use Quarry Road until it rejoins Pleasant Valley Road near Bucks Bar Road where it proceeds easterly to Pleasant Valley. East of Pleasant Valley, the trail proceeds along Clear Lake and the drainage divide between the American and Cosumnes rivers to Sly Park Road. It then follows Sly Park Road to Park Creek Road at Union Hill, north of Jenkinson Lake. East of Union Hill at the intersection of Park Creek, Hazel Creek, and Girard Mill Road, it follows Girard Mill Road along Iron Mountain Ridge to Old Iron Mountain and then proceeds southeasterly along Mormon Emigrant Trail Road to State Route 88 (SR88). The trail proceeds easterly along SR88 until it leaves El Dorado County southwest of Silver Lake to become part of the Emigrant Summit National Recreation Trail.

The Pony Express Trail. The Pony Express Trail, which follows a route along U.S. Highway 50, is also currently being considered for designation as a National Historic Trail and will eventually receive funding for development, maintenance, and operation. A substantial portion of its 76-mile total is in El Dorado County and is in regular public use. The El Dorado County portion of the route is ridden once a year in celebration of the pony express.

The Pony Express Trail enters El Dorado County from Sacramento County along Green Valley Road past Folsom Reservoir to Rescue where it turns south on North Shingle Road under U.S. Highway 50 to Pleasant Valley Road. The trail proceeds easterly along Pleasant Valley to the towns of El Dorado and Diamond Springs where it turns north to Placerville on Missouri Flat Road and Forni Road onto Main Street. The trail crosses over U.S. Highway 50 at Lucky Street and proceeds easterly on Carson Road to Cedar Grove and Pollock Pines. The trail generally follows the north side of U.S. Highway 50 to Strawberry where it crosses to the south side of

follows the north side of U.S. Highway 50 to Strawberry where it crosses to the south side of U.S. Highway 50 before crossing U.S. Highway 50 again to Echo Lake and Pioneer Trail Road in South Lake Tahoe to State Line.

Western States Trail. Essentially an extension of the existing Folsom Lake State Trails (Pioneer Express Trail) on the west side of the lake in Sacramento County, the Western States Trail runs nine miles through El Dorado County and is approximately 100 in length. The trail enters the County on the south side of State Route 49 (SR49) at the bridge over the American River to Auburn. It proceeds across SR49 on the south side of the river to Summit Hill, where it leaves El Dorado County to eventually take hikers and equestrians to Squaw Valley. Once across the Middle Fork of the American River, the old Western States Trail leads to the northeast, and the new Western States Trail follows the north side of the river.

Rubicon Trail. Most of the Rubicon Trail is in the Eldorado National Forest and is currently in use; 27 miles of the trail are located within El Dorado County. The trail begins at Lake Aloha where it proceeds westerly from its intersection with the Pacific Crest Trail. The trail follows the Rubicon River northerly to the Rubicon Diversion, then proceeds westerly along the south side of Rockbound Lake to Loon Lake. When completed, the trail would connect back to the existing Rubicon Trail creating a loop.

Hawley Grade National Recreation Trail. The two-mile long Hawley Grade Trail runs through the County. The trail starts at U.S. Highway 50 where it proceeds southerly to the Upper Truckee River. It then has the potential to connect to the Tahoe Rim Trail to the south.

Cosumnes Trail (Federal Portion). Approximately 29 miles of the proposed Cosumnes Trail would fall under Federal jurisdiction. This portion of the trail would start at the intersection of Happy Valley Road with Road 8068 north of Baltic Peak. It would proceed along that County Road past Canyon Creek and Van Horne Creek to the north side of the Cosumnes River where it would proceed easterly past Leek Springs Hill to the intersection with Iron Mountain Road. The trail then follows County Road 8071 before turning easterly to the Silver Fork of the American River and Cables Creek where an existing hiking trail is located. That existing trail extends easterly past Lake Margaret to its intersection with the Pacific Crest Trail at the end of Sayles Canyon.

Rockbound Trail. This nine-mile trail is primarily an existing national forest trail extending southwesterly from the Rubicon Trail east of Lake Doris and proceeding to Wright's Lake and its trail head. South of Wright's Lake, the trail is proposed to generally use Wright's Lake Road to connect to the proposed U.S. Highway 50 Trail.

Nevada Point-Parsley Bar Trail. While most of this trail would be in Placer County and under Federal jurisdiction, approximately 19 miles of the trail would be in El Dorado County. This trail would connect the Marshall Trail and the Divide Trail to the west with the existing Parsley Bar Trail along the Rubicon Trail as it leaves El Dorado County.

Forebay/Stumpy Meadows Trail (Federal Portion [12 miles]). This trail will begin at the west end of Lake Edson at Wentworth Spring Road (shown on the Bikeway Master Plan as an east/west corridor); then southerly on existing and proposed easements dedicated or to be dedicated by the Michigan-California Lumber Company to the U.S. Forest Service across private lands and the remainder on Eldorado National Forest lands to a point approximately 1.5 miles from the Pony Express Trail where the trail, then on Forebay Road, is on public road rights-of-way to the intersection of Forebay Road and the Pony Express Trail.

Camping

Another important recreation resource in the Eldorado Forest is the number of camping facilities available for public use. The U.S. Forest Service policies regarding camping are not the same for the Eldorado National Forest and the Lake Tahoe Basin Management Unit (LTBMU). More than 25 family and group campgrounds are maintained by the U.S. Forest Service, and dispersed camping is allowed anywhere in the forest with a permit. Camping is allowed only in designated areas in the LTBMU. Campsites can be clustered around particular resources, such as a lake, reservoir or river, or may occur where topography is conducive to camping. Individual sites are described in the following sections.

Other Areas In The Eldorado National Forest

In the Eldorado National Forest, while a few isolated campgrounds and recreation sites are scattered around the forest, most are clustered around a particular water resource. Recreation opportunities and activities in the Eldorado National Forest are generally focused on the following resources: Loon Lake, Union Valley and Icehouse reservoirs, the South Fork of the American River, and Stumpy Meadows Reservoir.

Loon Lake. Located in the northern portion of El Dorado County, west of Lake Tahoe, at an elevation of 6,378 feet, Loon Lake and nearby Wentworth Springs is a popular recreation area. The Loon Lake area is accessed from the west by Wentworth Springs Road and from the south by Icehouse Road. The lake is an excellent recreation resource that supports a number of recreation activities the most popular of which are swimming, camping, boating, and hiking. Motorboats are allowed on the lake. The Loon Lake, Wentworth Springs, and Pleasant camping and recreation sites are located in this area.

Union Valley Reservoir. Union Valley Reservoir is the largest body of water found entirely within the boundaries of El Dorado County. The nearby Icehouse Reservoir, found to the southeast, is also very large. The Union Valley Reservoir's elevation is 4,855 feet and the Icehouse Reservoir's elevation is 5,437 feet. The surrounding area, accessed by Icehouse Road, supports a large number of recreation activities, including fishing, boating, hiking, and swimming. The recreation sites in this area are Yellowjacket Campground, Wench Creek, Fashoda, Sunset, Big Hill, Icehouse Campground, and Silver Creek Campground.

South Fork of the American River. A number of recreation sites are scattered along the South Fork of the American River and U.S. Highway 50. Most of the sites include fishing, camping, and picnic facilities. Some sites allow more specialized activities such as horseback riding or panning for gold. The following sites are easily accessible from U.S. Highway 50 and are very popular recreation destinations: Bridal Veil, Cleveland Corral, Digger Indian Springs, Sand Flat, Eagle Rock, and 42 Mile.

Stumpy Meadows Reservoir (Also known as Lake Edson). This resource is a small lake northwest of Union Valley Reservoir and accessed by Mosquito and Wentworth Springs roads. The lake supports three recreation sites: Stumpy Meadows Campground, Black Oak Group Campground, and Cove Overflow,, where visitors can hike, fish, and enjoy boating activities.

Lake Tahoe Basin Management Unit

The Lake Tahoe Basin is a world famous area known for its scenic, recreation, and historic resources. A portion of the Lake Tahoe Basin is located in the eastern portion of El Dorado County. Lake Tahoe has a surface area of 191 square miles and lies at an elevation of 6,225 feet. The Lake Tahoe area is the site of numerous recreational activities including ski areas, camping sites, historic homes, trails, swimming, and boating. Federal, State, and local parks and recreation sites rim the lake. The Lake Tahoe Basin Management Area includes land owned and managed by the U.S. Forest Service and State Parks and Recreation Department and private parties.

The Lake Tahoe Basin Management Unit Land and Resource Management Plan (1988), prepared by the U.S. Forest Service, presents the management strategies for the Lake Tahoe Basin for the next 10 to 15 years. While protecting and preserving the water quality of Lake Tahoe is the major objective of the plan, it provides for increases in recreation opportunities. Dispersed non-motorized recreation is emphasized because a large portion of the Basin is without roads, and these activities are the least disturbing to the sensitive environment. Improving public access to Lake Tahoe and the other lakes in the Basin will continue to be a major objective of the plan. Skiing, scenic viewing, environmental awareness programs, camping, and hiking will also be emphasized.

Trails. An extensive system of trails to accommodate hikers, equestrians, and motorcycle riders is managed throughout the Tahoe Basin. Public demand is increasing for all types of trail use, and new trails are needed. As mentioned previously, the major trails that pass through or are located entirely within the Basin include the Pacific Crest Trail; the Emigrant Summit National Recreation Trail which links with the Pacific Crest Trail at its southern juncture; and the Western State Trail which links Squaw Valley with the Folsom Lake Recreation Area.

Fishing. Fishing is a major summer recreational activity generally associated with lakes and streams. Demand generally exceeds supply in easily accessible areas while supplies meet or exceed demand in remote areas. The California Department of Fish and Game operates a stocking program in many lakes in the Tahoe Basin.

Winter Sports. Many ski resorts currently operate in the Tahoe Basin. Heavenly Valley is the largest alpine ski resort partially located in El Dorado County. Cross-country skiing is popular near Carson Pass and Leek Springs, off State Route 88, and near Loon Lake north of U.S. Highway 50 in Crystal Basin.

Off-Highway Vehicle (OHV) Use. Except for over-the-snow vehicle travel, OHV recreation use is restricted to designated routes only. Motor vehicles, including OHVs, are allowed only on roads and trails designated for such use.

Other areas in the Tahoe Basin and within El Dorado County receive special attention because of their ability to provide recreational opportunities. Following is a brief description of these areas and the specific recreational facilities located there.

Emerald Bay. Located on the northwestern edge of Lake Tahoe, Emerald Bay is one of the most scenic areas in El Dorado County. In the vicinity of Emerald Bay, the shoreline of Lake Tahoe is managed primarily by the State Department of Parks and Recreation. The USFS manages a portion of the shoreline. Public access to the shoreline is via State park land. The primary use of the area is as a scenic highway corridor. State Route 89 circles Emerald Bay and provides spectacular views of one of the most beautiful spots in the world. Scattered along the road are several small recreation facilities including Bayview Campground, Eagle Falls Picnic Area, and Inspiration Point. D.L. Bliss State Park and Emerald Bay State Park, where the historic Vikingsholm estate is located, are also within this area. The trailheads at Bayview and Eagle Falls are popular access points into Desolation Wilderness, to White Cloud on Cascade Creek, and to Eagle Lake.

Fallen Leaf Lake Area. Fallen Leaf Lake is located in the Lake Tahoe Basin Management Unit southwest of Lake Tahoe. State Route 89 provides direct access. The area surrounding Fallen Leaf Lake contains the Glen Alpine, Taylor and Tallac creeks which drain the Desolation Wilderness, plus the Angora Lakes Basin and the Tahoe Mountain area just west of the City of South Lake Tahoe. This area is used very intensively. Located within the vicinity of Fallen Leaf are Pope, Baldwin and Kiva beaches; Camp Richardson Resort; the Lake Tahoe Visitor Center; Fallen Leaf Campground; organization camps; and wilderness trailheads.

The Fallen Leaf Lake area is also rich in historic and cultural resources. In addition to several prehistoric sites, historic resources include the Camp Richardson and Glen Alpine Springs historic resorts, the Angora Fire Lookout, and the Baldwin, Pope, and Valhalla estates. The U.S. Forest Service intends to enhance these cultural resources and create more opportunities for public enjoyment.

The Fallen Leaf Lake area will continue to be managed and developed for intensive recreation use consistent with its proximity to State Route 89.

Heavenly Valley Ski Area. The Heavenly Valley ski area is under special permit from the U.S. Forest Service to construct, operate, and maintain the ski resort. The ski resort was established in 1955 at the edge of the City of South Lake Tahoe. The base facilities are privately owned. The ski resort is heavily used and, according to the U.S. Forest Service, there is considerable opportunity to expand skiing capacity at Heavenly Valley. The Forest Service has estimated that 5,400 new skiers at one time could be accommodated on the California side.

Meiss Recreation Area. The Meiss area is located just south of State Route 89 and is a popular recreation area because of its beautiful vistas and easy trail access. Hikers, backpackers, and cross-country skiers can enjoy the cliffs, meadowed valleys, alpine peaks, and several lakes in the area. Trailheads in this area include Christmas Valley, Luther Pass, and Carson Pass.

Echo Lakes. Most of the area west of Meyers in the vicinity of Echo Summit is developed with recreation residences and facilities on National forest land. Private sector recreation tends to dominate the area. U.S. Highway 50 provides access to Desolation Wilderness, the Pacific Crest Trail, and Echo Lakes. Echo Summit Alpine Ski Area and Echo Nordic Center, located on U.S. Highway 50, provide recreation opportunities in the winter while Echo Chalet Resort on the eastern tip of Lower Echo Lake allows for water-based recreation activities in the summer. Primary uses in this area include hiking, boating, fishing, and summer homes.

A potential problem in this area is the number of privately owned recreation residences which may give some visitors the feeling that the area is an exclusive private resort. Increased public information, signing, adequate parking, and construction of an entry portal have been identified as potential projects that would all help to encourage public access and use.

Desolation Wilderness. The Desolation Wilderness is an important recreation resource. Desolation Wilderness lies immediately southwest of Lake Tahoe. Portions of the Desolation Wilderness are in both the Eldorado National Forest and the Lake Tahoe Basin Management Unit. Desolation Wilderness contains 63,475 acres of spectacular scenery, high glaciated basins, craggy peaks, and more than 130 mountain lakes. Elevations range from 6,000 to 10,000 feet. Desolation Wilderness is one of the most heavily used wilderness areas in the National forest system and has an overnight camping limit set at 700 people from June 15 through Labor Day (USFS, 1988c). The headwaters of the Rubicon River, the South Fork of the American River, and numerous lesser drainages that empty into Lake Tahoe are in the Desolation Wilderness. The primary uses in Desolation are hiking, camping, and fishing.

The U.S. Congress has determined that this area will be maintained as a wilderness area where opportunities will be provided for public use, enjoyment, and understanding of Desolation Wilderness at a level of visitation that assures solitude and a primitive, unconfined recreation experience.

California State Parks and Recreation

Many recreation opportunities including camping, swimming, hiking, horseback riding, and fishing are provided by the State of California and administered by the California Department of Parks and Recreation. The State owns and operates more than 60,000 acres of park and recreation areas in El Dorado County. In the western portion of the County, the Folsom Lake State Recreation Area offers campgrounds, miles of hiking and equestrian trails, and shore fishing and trolling. At the Marshall Gold Discovery State Historic Park in Coloma, a visitor can learn about the discovery of gold and visit many of the historic buildings that have been either preserved or rebuilt. In the far eastern portion of the County at Lake Tahoe are more opportunities to view historical houses and sites. Among the attractions along the south shore of Lake Tahoe are the Ehrman Mansion at Sugar Pine Point State Park and Vikingsholm at Emerald Bay State Park. In addition to those mentioned above, other State parks and recreation areas are located in the County.

Auburn Lake State Recreation Area. The Auburn State Recreation Area encompasses 42,000 acres fronting on both the south and Middle Forks of the American River. The western boundary is a segment of Folsom Lake. The area is popular for horseback riders and hikers. The river frontage is frequented by river users, kayakers, rafters, and whitewater canoeists.

D.L. Bliss State Park. Adjacent to Emerald Bay State Park and containing 1,237 acres, D.L. Bliss State Park is situated directly on Lake Tahoe. The park contains more than four miles of trails, campsites, picnic sites, beaches, and a nature trail. The area has forested slopes, rugged shoreline, and beaches. The California State Lands Commission has leased the lakebed adjacent to the park and the lake frontages as an underwater park appropriate for scuba diving.

Emerald Bay State Park. Emerald Bay State Park is considered to be one of the most beautiful areas in the United States, proven by its status as a Registered Natural Landmark. The glacier-carved terrain of the park provides unequaled scenic views. The elevation of the 1,830 acre park ranges from 6,229 to 6,800 feet. The park contains campsites (some with boat-in sites), trails, Lake Tahoe's only island, and the historic Vikingsholm summer residence.

Sugar Pine Point State Park. Located on the western side of Lake Tahoe, Sugar Pine Point is a gently sloping, beautifully forested promontory that includes 1.75 miles of lake frontage. The park also includes a unique area where untouched forest still exists. In the developed area are a number of historic buildings including a log cabin and the Ehrman Mansion. The park provides entry to the Desolation Wilderness area. Consisting of 2,011 acres, major activities in the park are camping, hiking, picnicking, swimming, boating, and fishing.

Folsom Lake State Recreation Area. Only a portion of the Folsom Lake State Recreation Area is located in the westernmost part of El Dorado County. Approximately 290,116 persons visited that portion of the park in 1989. The Folsom Lake area is rich in opportunities to enjoy a wide variety of water sports and recreation activities, including fishing, boating, water skiing, swimming, and windsurfing.

Trails provide important recreation opportunities at Folsom Lake, and there are currently 50 miles of State-maintained trails. These trails include the Pioneer Express Trail on the west side of Folsom Lake in Sacramento County and the South Fork Trail on the east side of the lake in El Dorado County. The South Fork Trail travels seven miles through the County, beginning at Green Valley Road where it connects with the Pony Express Trail and proceeds northerly to Brown's Ravine Picnic area and the Folsom Marina.

Marshall Gold Discovery State Historic Park. One of the most popular parks in the County is the Marshall Gold Discovery State Historic Park. The park consists of 265 acres on the South Fork of the American River in the center of the Coloma Valley. State Route 49 runs through the park and provides direct access. The park is open year-round and provides many different recreation opportunities. The historic structures and interpretive resources in the park are, however, the most important elements in the park. James W. Marshall discovered gold at a site in the park in 1848, and the major theme of the park is the interpretation and portrayal of the history that unfolded at the time of the discovery and during the ensuing Gold Rush. The park remains the focal point of the gold discovery area for the many visitors who come to the County in search of Gold Rush history and artifacts. The park is on the National Historic Register.

The park offers 3.66 miles of interpretive hiking trails, family and group picnic sites, a museum and visitor center, a recreation of Sutter's Mill, tours of house museums, and 27 historic structures dating from 1850 to 1935. Approximately 500,000 people per year visit the park.

Lake Valley State Recreation Area/Washoe Meadows State Park. Lake Valley State Recreation Area (SRA) is located in the Lake Tahoe Basin south of the City of Lake Tahoe and adjacent to U.S. Highway 50 near Meyers. Washoe Meadows State Park borders Lake Valley SRA to the west. The Upper Truckee River flows through Lake Valley and is used by trout fishermen during the summer months. The recreation area covers approximately 181 acres, the majority of which are developed as a golf course, the Lake Tahoe Country Club. During the winter months, the area is used for snowmobiling and cross-country skiing. The parking lot serves as a trailhead for skiers who then access the trails in Washoe Meadows State Park and adjacent U.S. Forest Service lands. Proposed improvements to Lake Valley SRA include the development of a family picnic area, improved parking and bathrooms, and additional interpretive installations. Approximately 57,132 persons visited Lake Valley in 1989, and 1,227 persons visited Washoe Meadows.

Sno-parks. Sno-parks are State-operated recreation areas dedicated to recreation activities associated with winter, including sledding, skiing, or snowmobiling. Many sno-park areas are located on National forest land. Sno-parks are large parking lots continually snowplowed to enable visitors to enjoy winter activities. The parks are supported by user fees. Three sno-parks already exist in the County, and a fourth park is proposed near Echo Summit. The proposed Echo Summit Sno-park will be best suited for cross-country skiing because the parking lot is adjacent to the trailhead for the trail to Echo Lake. In El Dorado County, sledding can best be enjoyed at the two Tahoe Basin sno-parks on State Route 89: the Taylor Creek and the

Lake Tahoe Visitor Center Sno-parks. The Iron Mountain Sno-park on State Route 88 west of Carson Pass is best suited for snowmobiling. The County is trying to find another suitable site for a sno-park along U.S. Highway 50 because visitors are currently using private property for snow-related activities.

El Dorado County

El Dorado County owns and operates a number of regional recreation areas and is also involved in trail designation and construction as well as planning and administering the use of rivers flowing through the County for recreation activities.

As mentioned previously, there are five County Service Area Recreation Zones of Benefit under the authority of the County Board of Supervisors; in County Service Area #9 on the Western Slope there are four Zones of Benefit: Ponderosa, Gold Trail, Mother Lode, and Camino/Pollock Pines Recreation Districts. The fifth Recreation Zone of Benefit is in County Service Area #3 in the Lake Tahoe Basin and is associated with the proposed Golden Bear Park. The County Parks and Recreation Division is responsible for the recreation facilities located within the recreation service areas.

Following are brief descriptions of the facilities and activities operated by the County Parks and Recreation Division including specific parks; parks and facilities associated with the community services district and recreation districts; the pedestrian, equestrian and bikeways trail system; river-oriented recreation; and more significant recreation activities offered within the County.

Recreation Sites

The El Dorado County Fairgrounds. The El Dorado County Fairgrounds are located in Placerville and consist of 54 acres of land developed for the annual El Dorado County Fair which is held in July. The fairgrounds are managed by the Fair Board and Fairgrounds Manager. Facilities at the Fairgrounds include a racetrack, eight exhibition buildings, barns, turfed areas, and hookups for recreation vehicles. Other events held at the fairground include the Hangtown Pro Rodeo held in June, the Fourth of July Family Blast, the Annual Mother Lode Antique Show, and Sale in August, the Annual Butterfly Concert in September, and Premier Night celebrity concert held in November. Walker Field, fully booked by softball teams from spring to late fall, is also located at the Fairgrounds.

Finnon Lake. Finnion Lake is a 117-acre park leased by the County from the State Division of Fish and Game. Recently, the State Division of Dam Safety has declared the Finnion Lake Dam seismically unsafe. The dam will either have to be substantially repaired, replaced, or breached. The Division of Fish and Game has no financial resources available with which to solve this problem. They have determined that due to a number of reasons including the dam safety issue that the property should be sold either to the County or a private entity. The County has requested a six-month option on the property to evaluate the feasibility of County ownership.

Henningsen/Lotus Park. Located in Lotus adjacent to the South Fork of the American River, this 50-acre park was acquired by the County in the early 1980s. Currently, the park has an improved entrance drive, gravel parking lot, and is heavily used in the summer for river access. This spring, a five-acre turf area will be planted for use as a multi-purpose sports field. The master plan which will be implemented over the next five years as financial resources are available includes additional ballfields, hard courts for tennis and basketball, restroom facilities, interpretation center, and improved river access.

Ponderosa High School Joint Development. Recently completed, the County installed a large soccer field at the high school for use by the school and public.

Camino School Joint Development. In the spring of 1994, the County will install a sports field on this school site.

Bass Lake. Through a Memorandum of Understanding between the two CSDs, the Rescue School District and the El Dorado Hills Development Corporation, a ballfield will be built on E.I.D. property at Bass Lake. The County is funding construction of this field to be completed in June 1994.

Golden Bear Park. Located in east El Dorado County in the South Lake Tahoe Area, the proposed Golden Bear Regional Park consists of approximately 410 acres, approximately 47 acres of which will be developed for active recreation use. Some of the land is owned by the City of South Lake Tahoe, and the rest is under the ownership of the U.S. Forest Service. The land has been informally used for some summer and winter recreation activities. Numerous public groups throughout the service area desire to see a regional park created at this site. The site is strategically located public land with the capability of meeting the need for a regional recreation facility in the South Lake Tahoe area. The master plan prepared for the park includes passive recreation with trails, picnic areas, an archery field, natural areas, nature interpretive center, sports fields, tot lots, tennis courts, stage, and year-round use.

Shingle Springs Park. The park consists of one acre, and facilities include picnic facilities and a tot lot.

El Dorado Trail is an eight-mile trail owned by the County that traverses between Placerville and Camino. Approximately 1.7 miles of the trail has been completed; and with Federal ISTEH funding, additional mileage will be completed this spring.

Miller High School Site is a joint-use agreement site with the Latrobe School District. A baseball field for use by the school and little league has recently been completed.

VeerKamp Park is a proposed 13-acre park behind the School Board offices on Green Valley Road. A baseball field will be completed this spring.

Pioneer Park is also located in the Mother Lode District. This 23-acre park currently has two sports fields. This spring an equestrian arena, tot lot, and restroom facilities will be constructed.

Trails. Two documents, The Hiking and Equestrian Trails Master Plan for El Dorado County 1989, revised in April 1990, and the Bikeway Master Plan, adopted in 1979, established the County's trail plan. These two plans have been combined and are to be implementing documents referenced in the General Plan. The equestrian and pedestrian trails are fully described in the Hiking and Equestrian Trails Master Plan and the bikeways are described in Bikeway Master Plan.

The Hiking and Equestrian Trails Master Plan for El Dorado County 1989, revised in 1990, established 14 regional trail corridors considered to be the County's responsibility. The plan also lists 11 trails as Federal trails, one State trail, and one regional trail. Currently the County is actively seeking to acquire rights-of-way along designated trail corridors to ensure public access. Approximately 1.7 miles (Placerville segment) of the El Dorado Trail has been completed.

Existing and proposed hiking and equestrian trails and trailheads that would be operated by the County are listed in Table 9-2, and the individual routes are described in detail in the Hiking and Equestrian Trails Master Plan, on file with the Planning Department. The descriptions include: link number for identification, existing or suggested trail name, approximate length of link, general description of the trail location that may vary in detailed implementation. Trails are shown on the large-scale map available at the County Planning Department. The link numbers shown in Table 9-2 refer to the trails shown on the large scale map. The proposed Trails Plan is primarily a corridor system with most local trails not shown except as directional links from the main system.

Trailheads. The master plan proposes to provide 22 trailheads or staging areas to be used as meeting and parking areas for trail use. Thirteen of the 22 trailheads were proposed by the original Trails Advisory Committee with nine so far proposed by members of the current committee. Two of the proposed trailheads are private while the balance would be maintained by a public agency. Table 9-3 provides a summary of the proposed trailheads by number, name, governmental responsibility, and general location.

TABLE 9-1
HIKING AND EQUESTRIAN TRAILS

			Length
F-1	Pacific Crest National Scenic Trail	Federal	28
F-2	Mormon-Carson National Historic Trail	Federal	58
F-3	Pony Express National Historic Trail	Federal	76
F-4	Western States Trail	Federal	9
F-5	Rubicon Trail (Two Peaks Trail)	Federal	27
F-6	Hawley Grade National Recreation Trail	Federal	2
F-7	Cosumnes Trail (portion)	Federal	29
F-8	Rockbound Trail	Federal	9
F-9	Parsley Bar-Nevada Point Trail	Federal	19
F-10	South Fork-Icehouse Road Trail	Federal	N/A
F-11	Forebay/Stumpy Meadows Trail	Federal	12
S-1	Folsom Lake Trail (South Fork)	State	7
R-1	Tahoe Rim Trail	Regional	40
C-1	Cosumnes Trail	County	33
<i>Alternatives</i>			
	Old Diamond-Caldor Railroad	County	11
	Southern Loop	County	35
C-2	Park Creek-Old Highway 50 Trail	County	26
C-3	El Dorado Trail	County/City	8
C-4	Southern Pacific Trail	County	26
C-5	Latrobe Trail	County	10
C-6	Salmon Falls-Knickerbocker Trail	County	10
C-7	Pilot Hill Trail	County	6
C-8	Marshall Trail	County	33
C-9	Divide Trail	County	16
C-10	Deer Creek Trail	County	2
C-11	Green Valley Road Trail	County	9
C-12	Black Oak Trail	County	11
C-13	SMUD Easement Trail	County	23
C-14	Forebay/Stumpy Meadows Trail	County	1.5
TOTAL			300.5
Source: The Hiking and Equestrian Trails Master Plan for El Dorado County, 1989			

**TABLE 9-3
HIKING AND EQUESTRIAN TRAILHEADS**

Number	Name	Agency	General Location
1	Cool	County	Northside Fire Department
2	Pilot Hill	State	East of State Route 49
3	Meadowbrook	Federal	East of State Route 193
4	Pine Hill	State	Pine Hill
5	Volcanoville	Federal	Rubicon Road
6	Weber Creek	E.I.D.	Weber Creek at Snow's Road
7	Grizzly Flat	Private	Grizzly Flat at Sciaroni Road
8	Capps Crossing	Federal	Capps Crossing
9	Cabin Creek	Federal	Cabin Creek
10	Caldor	Federal	At Caldor
11	Silver Lake	Federal	At Tragedy Creek
12	Strawberry	Federal	At Cody Creek
13	Schneider Camp	Federal	At Schneider
14	Echo Lake	Federal	Echo Lake
15	Wright's Lake	Federal	Wright's Lake
16	Jones Silver	Private	
17	Sly Park	E.I.D.	Jenkinson Lake
18	Emerald Bay	State	Emerald Bay
19	Loon Lake	Federal	Loon Lake
20	Telles Creek Primitive Horse Ranch	Federal	Ed Telles Creek
21	Pony Express	Federal	On Wright's Lake Road north of U.S. Highway 50
22	Sugarloaf	Federal	North of Kyburz

Source: *The Hiking and Equestrian Trails Master Plan for El Dorado County, 1989*

Bikeways

The Bikeway Master Plan for El Dorado County was adopted and was made a portion of the Recreation Element by the County Board of Supervisors in March 1979. As defined in the plan, bikeways include bike trails, bike lanes, and bike routes. The Bikeway Master Plan was developed in an effort to coordinate plans and develop a system of bicycle trails that will safely fulfill the needs of County residents.

The ad hoc Committee on Bicycles helped prepare the Bikeway Master Plan. The Committee recognized that there was a high level of interest and support for a County-wide bikeways system. In addition, the Committee recognized that while bicycling is one of the fastest growing leisure activities, the American River Bikeway in Sacramento was the nearest established bicycle trail facility.

In addition to interest in bike paths for the physical conditioning benefits of cycling, the increased safety factor associated with bikeways is also important. Bikeways help both protect and separate bicyclists from vehicular traffic and keep an orderly flow of bicycles going with traffic. Additionally, bikeway signing alerts motorists to the probability of cyclists on the road. The overriding concern in the establishment of bikeways must be the safety of the cyclist; however, bikeways also have a positive effect on relieving congestion and air pollution and, to some degree, reduce fuel usage.

Types of Bikeways. Bikeways can generally be divided into three classes:

Class 1. This type of bikeway is a "completely separated right-of-way" designated for the exclusive use of bicycles. Crossflows by pedestrians and motorists are minimized. (Bikeway Planning Criteria and Guidelines, April 1972. Prepared by the Institute of Transportation and Traffic Engineering.) While safety is the primary advantage of this type of bikeway, the initial cost of implementing paths of this type is substantial.

Class 2. This type of bikeway is characterized by bike lanes that are restricted rights-of-way designated for the exclusive or semi-exclusive use of bicycles. Through-travel by motor vehicles or pedestrians is not allowed. Vehicle parking and crossflows by motorists and pedestrians to gain access to driveways, parking facilities, or associated land uses may be allowed. Class 2 bikeways are generally less expensive than Class 1 bikeways. Costs include signing and shoulder-striping. Bike lane stripes help insure an orderly flow of traffic by establishing a specific line of demarcation for the bikeway.

Class 3. A Class 3 bikeway is a shared right-of-way designated as such by signs placed on vertical posts or stencilled on the pavement; any bikeway that shares its through-traffic right-of-way with either or both moving motor traffic and pedestrians is designated as a Class 3 bikeway. This type of bikeway is the least costly. Signs help alert motorists to watch for bicyclists, help guide the cyclist in unfamiliar areas, and attract more use by cyclists which helps to establish the roadway as a bicycle facility.

Existing Bikeway Plans

Some communities have made progress in planning and constructing bicycle trails in the County. Caltrans has completed Class 2 lanes along U.S. Highway 50 in Placerville, connecting Placerville Drive with Main Street. The Tahoe City Public Utilities District has planned for trail construction in the Tahoe Basin. El Dorado Hills Community Services District has initiated a bikeways plan. The City of Placerville has initiated a system of bicycle trail signs, and the City of South Lake Tahoe has initiated a bicycle route plan.

Designation of Routes

Four types of bikeways have been established under the Master Plan and are defined below:

Trans-county Bikeways (TCR) are intended primarily to serve trans-county transportation needs and are of major importance because they connect to established or planned routes in adjacent counties.

County Arterial Bikeways (CAR) serve as intra-county connectors paralleling the main established arterial roads and usually have travel distances that are shorter than trans-county routes.

School Routes (SR) are intended to provide for the safe bicycle or pedestrian transportation of children to and from school.

Recreation Routes (REC) are designated in areas of exceptionally high scenic quality or areas where they would otherwise provide valuable recreational use.

A complete description of the bikeway routes can be found in the Bikeways Master Plan, currently being revised by the Regional Transportation Commission. The description includes the trail type and the letter designation of the trail. Proposed bikeways are mapped on a large-scale map at the County Planning Department.

Rivers

As previously mentioned, water is an important recreation resource in El Dorado County. The American, Rubicon, Cosumnes, and Truckee rivers run through the County; and the Rubicon River and the South Fork of the American River have their headwaters in the snow-covered mountains located in the central portion of El Dorado County. By far the most important river in terms of recreation use is the South Fork of the American River.

South Fork of the American River. The lower portion of the South Fork of the American River is the most popular river for commercial whitewater rafting in the western United States (BLM, 1990). This portion of the river encompasses a challenging 21-mile stretch of river with white-water rapids between Chili Bar, near Placerville, to Folsom Lake. The primary recreation opportunities and facilities along the river are listed in Table 9-4. It is estimated that in past years as many as 120,000 people took raft trips on the river. In addition, approximately 10,000 kayakers also use the river annually. The estimated physical capacity for whitewater boating on the South Fork as a recreational river is estimated to be 218,000 annually; and as a semi-wilderness river, the physical capacity is estimated to be 126,000 annually (El Dorado County Planning Department, 1982).

TABLE 9-4 PRIMARY RECREATION OPPORTUNITIES AND FACILITIES: SOUTH FORK OF THE AMERICAN RIVER AREA	
<i>Whitewater Recreation:</i> Miles of River	21
<i>Picnicking:</i> Number of Sites Number of Areas	121 7
<i>Cultural and Historical Observation:</i> Number of Exhibits or Features	42
<i>Hiking/Walking:</i> Miles of Trails	2.5
<i>Gold Panning and Dredging:</i> Miles of River Open	5
<i>Camping:</i> Number of Primitive Sites Number of Developed Sites	45 511
<i>Bicycling:</i> Miles of Bikeway Miles of Trails	0 0
<i>Horseback Riding:</i> Miles of Equestrian Trails	0
<i>Fishing:</i> Miles of River Open to Anglers	21
Source: U.S. Department of the Interior, Bureau of Land Management, American River National Recreation Area Feasibility Study, May 1990.	

Most South Fork rafting is undertaken with the services of experienced guides. The guides are employed by private, licensed, outfitting companies of which there are currently 12. The trip from Chili Bar generally takes two days with a stop at Coloma or Lotus. In 1990, prices ranged from \$35 per person for a one-day trip on the river to \$275 for a deluxe two-day trip. The number of commercial river rafters are controlled by El Dorado County which manages the whitewater recreation on the river.

River Management Plan. Carefully protecting this important resource while allowing the public to use and enjoy it are major objectives of the County Parks and Recreation Division (PRD). For this reason, in 1984 the County Board of Supervisors adopted the River Management Plan, South Fork of the American River. The plan is intended to provide overall guidance for the long-term use of the river and adjacent riparian lands by:

- Establishing a set of operational rules for commercial and private boaters along the South Fork;
- Protecting the environmental quality of the river;
- Maintaining the values sought by the river users and landowners, and
- Protecting the public's health, safety, and welfare.

Sixty percent of the land fronting on the river is in private ownership; and 40 percent is in public ownership. The BLM administers 82 percent of the land under public ownership; 17 percent is managed by the California Department of Parks and Recreation, and one percent is under the ownership of El Dorado County (BLM, 1990). Private land along the river falls under the County's land-use planning jurisdiction. Residential landowners along the river have been concerned with the increase in river use. Trespassing, noise, and other problems have created conflicts between river recreation users and landowners. Because both the river users themselves and the landowners complained about the periodic overcrowding and congestion, a set of limiting factors which affect the carrying capacity of the river were established and analyzed as part of the Management Plan; and carrying capacity levels were set as part of the planning effort. The Management Plan was adopted as a means of relieving or solving those conflicts and problems. The Management Plan describes how the commercial and non-commercial boating use on the South Fork is to be managed. In addition, there are management policies for specific areas along the river that are suitable for camping and access. In the plan, land areas that should be leased, purchased, or managed by the County and other lands that should be maintained as residential, commercial, open space, or other uses are identified.

Other groups are also involved in attempting to increase public access to the river. The American River Land Trust is a private, non-profit group attempting to acquire an open space corridor along the river from Marshall Gold Discovery State Park to Folsom Lake.

In contrast to the lower stretch, the upper reach of the South Fork of the American River in the Eldorado National Forest has received only a minor amount of use, primarily by rafters and kayakers. There has been increasing interest in the past two or three years by commercial rafters; but to date, no special use permits have been issued. It is proposed that when sufficient interest is demonstrated, the U.S. Forest Service will work with the rafters on a pilot study to identify various classifications, put-in and take-out locations, and capacities (USFS, 1988c).

Other Rivers

Two rivers running through a portion of El Dorado County have been added to the U.S. Park Service Inventory of Wild, Scenic, and Recreational Rivers: the North and South Forks of the Cosumnes River and the Rubicon River. In addition, the North and Middle Forks of the Cosumnes River are designated for recreational use.

Fishing

Fishing is an important recreation activity in the County. Trout fishing occurs most months of the year, and bass and bluegill can be caught in lakes at lower elevations in the County. Along the South Fork of the American River, rainbow and brown trout can be caught. The heaviest fishing pressure is felt at Coloma as a result of the State park located there. The Folsom Reservoir is also an important fishing resource because it is inhabited by Kokanee salmon, a landlocked version of Pacific salmon; Chinook salmon; rainbow trout; bass; sunfish; and catfish. The Crystal Basin area, a mountainous region 25 miles east of Placerville that includes Loon Lake, Union Valley and Icehouse reservoirs, is a popular fishing area. Sly Park Reservoir, near Pollock Pines; Stumpy Meadows, near Georgetown; and Wright's Lake also offer good fishing. At Lake Tahoe, deep-line fisherman search for Mackinaw Lake trout and Kokanee salmon. Fishermen who prefer toplining or-trolling, fish for rainbow, brown, or brook trout. Finnon Lake at Mosquito offers blue gill, bass, and catfish.

El Dorado Irrigation District (EID)

Sly Park, located at Jenkinson Lake, is the only recreational area in the County operated by EID. However, the agency does own other parcels that may be developed for recreational use in the future. Although Sly Park is owned by the U.S. Bureau of Reclamation, the operation and maintenance of the park were transferred to the EID by a lease agreement. Sly Park is located in the central portion of the County, east of Placerville, and can be accessed by U.S. Highway 50 and Sly Park Road. Sly Park receives more than 225,000 visitors a year and covers approximately 2,000 acres. The park is the closest "alpine-forested" mountain lake to the Sacramento area; its location, as well as the reservoir's high quality and diversity of recreation opportunities account for its popularity for more than 30 years. Within the park, visitors can camp, visit historical sites, engage in watersports, ride on six miles of equestrian trails, and hike on 12 miles of pedestrian trails. There are some equestrian campsites at this facility.

Other undeveloped lands owned by EID that may be developed in the future are Bass Lake in the El Dorado Hills area and the area around the proposed Texas Hill Reservoir near Diamond Springs. A Memorandum of Understanding is currently being developed between the two CSDs, El Dorado County, and EID to begin construction of several ballfields. This property may, in the future, become a West Slope regional park facility.

Community Recreation Providers

Recreation and park facilities are also provided by two community service districts and one recreation service district. In El Dorado County, the community service districts that operate and maintain public parks are Cameron Park Community Services District and El Dorado Hills Community Services District. Serving the Georgetown Divide area is the Georgetown Divide Recreation District. Tahoe Paradise Resort Improvement District, a quasi-public agency, also

provides a recreation facility for the residents of Paradise which is located approximately seven miles west of South Lake Tahoe. In addition, the County's two cities also have their own community park systems; they are the Placerville Recreation and Parks Department and the South Lake Tahoe Recreation Department.

In many of the developed communities in the County, active recreation facilities at school sites can be used by local residents during after-school hours for softball, football, soccer, and other field activities. There are also, on the Western Slope, playing fields apart from school facilities which are lighted for night use. Yet, there remains an expressed need by urban communities for more athletic fields, apart from the school facilities, that can accommodate adult soccer and softball leagues, little league, and other active field sports. Flat-turfed areas with lighting for evening activities and adjacent parking are the types of uses requested. It is expected that school playgrounds will continue to be an important local recreation resource for communities.

The following are brief descriptions of the recreation resources administered by each of the community services districts and recreation district.

Cameron Park Community Services District. The Cameron Park Community Services District (CPCSD) owns and operates park and recreational facilities and programs in the Cameron Park area. The policies, standards, and recreation sites identified and adopted in the Master Plan for Cameron Park supersedes the County Recreation Element within the Service District boundaries. The power to provide public recreation by means of parks, playgrounds, golf courses, swimming pools, or recreation buildings was adopted in 1971; and a Parks and Recreation Department was created in 1975.

The CPCSD consists of medium density, single and multiple dwelling residential, and commercial properties. The majority of the lands were formally subdivided and designed to resemble a master-planned residential community. In order to fulfill local recreational needs and the typical demands normally inherent in residential communities of this type, certain lands were set aside and are managed for recreational purposes. For people living in a concentrated community, such as Cameron Park, the highest demand for recreation occurs after work, after school, and on weekends. Because of the nature and intensity of demand, communities are the entities best able to provide park and programmed recreation activities including organized sports leagues.

CPCSD has adopted typical recreational facility standards normally considered desirable for a community of its size. The standards are as follows:

Neighborhood Playground or Parks (2 to 5 acres). Approximately two acres per 1,000 population should be provided. Park facilities should include: swings, slide, sand box, play apparatus, turf area, paved area for court or wheeled toys and cycles, benches, walks, trees, shrubbery.

District or Community Park (15 to 25 acres). Approximately two acres per 1,000 population should be provided. Park facilities should include: sport fields at 1.5 acres per 1,000, tennis courts, horseshoes, shuffleboard, lawn areas, outdoor swimming pool (one per 25,000), band shell, picnic area, playground, camp center, parking area.

Golf Course. One 18-hole course per 50,000 population.

Boating, Fishing, Picnicking. One 20-acre water area or one lake per 25,000 population.

Indoor Recreation and Social Center. One indoor facility per 10,000 and over population.

In addition, CPCSD has adopted the recreational standards developed by the El Dorado County Recreational Plan for residential subdivision lands requiring a dedication of five acres of active recreation park land or payment of fees in-lieu thereof for each 1,000 inhabitants to be jointly determined by CPCSD and the Board of Supervisors.

The CPCSD currently operates two park facilities, Cameron Park Lake and Cameron Woods Community Park, and has secured eight other relatively undeveloped sites. Cameron Park Lake is a 51-acre park of which 41 acres are surface water offering tennis courts, picnic areas, boat rentals, a swimming area, volleyball, and a playground. Cameron Woods Community Park consists of ten acres developed with ballfields and turfed areas. Other parks having minimal development, consisting of walking paths, some picnic areas, and a playground are Hacienda Park (five acres), Gateway Park (13 acres), and Royal Oaks Park (ten acres). A Community Center building is currently being designed for the Community Center site in the southern portion of the community. Construction of this facility is projected to be completed by 1994 if funding is made available through a \$3.5 million special assessment that needs voter approval.

There are also a number of private recreation providers within the area such as the El Dorado Royal Country Club and Golf Course.

Funding

The area within Cameron Park is growing very rapidly and the CPCSD would like to improve secured park sites, develop new parks, and provide additional recreational programs as quickly as possible. The Jarvis-Gann Initiative of 1978 limited funding to the district. Some revenue may be collected as a result of development and use fees required by State and County law when development occurs. However, operation and capital improvement funds may not be sufficient to sustain the recreation program.

Needs

Based on a projected total population of 22,600 within the anticipated district boundaries and the recreational facility standards listed above, the following amenities should be secured to serve public demand for recreation facilities:

- A total of 80 acres of neighborhood playgrounds or parks with a minimum of 16 locations at two to ten acres each;
- A total of 80 acres of district or community parks with a minimum of four locations at 10 to 25 acres each, including 34 acres of sports field area;
- One lake with a 20 acre minimum water area;
- A minimum of one recreation and social center; and
- One nine-hole golf course.

There are six existing district-controlled properties capable of providing neighborhood parks; four properties capable of providing community parks including a lake facility and a community center complex; and a joint-use facility at Camerado Springs School that provides field access. Seven additional park sites will need to be dedicated or acquired to fulfill the existing standards. Currently, there are 89 acres of developed park land and 35 acres of unimproved but dedicated park land.

The Community Services District has established a maximum tax rate of \$0.006 per \$100 assessed valuation for parks and recreation purposes. It is acknowledged that current revenues allow only sufficient funds to operate and maintain the existing greenbelt areas and Cameron Park Lake. The Cameron Park CSD also keeps records of use at Cameron Park Lake.

Additional acquisitions and future major facility improvements can only be attained by a combination of the following additional sources or methods:

- increased tax rate;
- special district bond sales;
- lease and cooperative arrangements;
- County, State and Federal allocations and grants; or
- subdivision and annexation park dedications and/or fees.

El Dorado Hills Community Services District. The El Dorado Hills Community Service District (EDHCSD) was founded in 1962 by an action of the Board of Supervisors, and in 1977 the CSD Board of Directors created a Parks and Recreation Department within the EDHCSD. In 1981, the EDHCSD adopted a Recreational Facilities Master Plan to provide a planning document designating and providing for the logical acquisition and development of public parks and recreational facilities within the district. The Facilities Master Plan is currently being revised and should be available by 1991.

El Dorado Hills Community Services District currently serves a land area of 22 square miles and a rapidly growing population estimated by the California Department of Finance on January 1, 1990, to be 9,801. This estimate reflects an 18.4 percent growth factor during the prior 12 months. During calendar 1989, the growth increase was estimated at 14.78 percent.

The EDHCSD continues to be built on the concept of the Gruen Plan, village concept and, in spite of the area's rapid urbanization, has managed to maintain this concept in its planning and development. EDHCSD provides recreation facilities and programs reflecting this concept and is the logical entity to provide parks, recreation facilities, organized sports and leagues, and organized recreational programs for the district's residents-at-large.

Parks, recreational facilities, and programs are founded through general taxes and approved special assessments and fees. Generally, the same recreational standards are applied as are used by similarly sized CSDs in surrounding Northern California urbanized counties.

The EDHCSD regularly provides 16 recreation sites and a full range of community-based recreation programs for all seasons. Eleven developed facilities are exclusively owned and operated by the CSD. Numerous other undeveloped park sites are owned and will be developed according to need and available capital improvement funding (see Table 9-1). Additionally, a number of parks are proposed for the El Dorado Hills Specific Plan Area which have not been included in Table 9-1. The largest park operated by the district is the 40-acre El Dorado Hills Community Park, which includes turfed areas, irrigated ballfields, a community center building (Pavilion), a Community Activities Building, play areas, and other soon-to-be-developed community-wide recreation facilities. Bertelesen Park is another important recreation site in the area. Facilities at this 10.76-acre recreation site include lighted ballfields, swimming pool, turfed areas, picnic areas, and a tot lot. The Tennis Court Park is a six-acre park offering irrigated turf areas for soccer and small group field play, tennis courts, courts for volleyball and basketball, picnic facilities, and a large children's play apparatus.

Indoor facilities are available at the Pavilion, Community Activities Building, and Brooks School gym. Other recreation facilities operated by EDHCSD include neighborhood parks (one to four acres in size), area parks (10 to 15 acres in size) having turfed areas, hard courts, trails, play apparatus for children, and picnic tables. The El Dorado Hills Golf Course is an 18-hole, privately owned, publicly accessed facility located just north of U.S. Highway 50.

Needs

Based on a projected population of more than 80,000 inhabitants at build-out within existing district boundaries and the recreational facility standards adopted by EDHCSD, 400 plus acres of active recreation park land, including the following amenities, should be available:

- a total of 230 acres of neighborhood playgrounds or parks with a minimum of 80 locations with up to four acres each;
- a total of 105 acres of area parks with a minimum of seven locations with between 10 and 20 acres each, including 70 acres of sports field area;
- a total of 40 acres of community park area;

- one lake with a 20-acre minimum water surface area;
- a minimum of one recreation and one social center; and
- one 18-hole public golf course.

EDHCSD has adopted the recreational standards established in the El Dorado County Recreational Plan and authorized by County ordinance for residential subdivision lands that require a dedication of five acres of active recreation park land for each 1,000 district inhabitants. These standards, the County Ordinance, the Gruen Plan, and the updated El Dorado Hills Recreation Facilities Plan (1990) are the basis for district parks and recreation planning goals.

In general, the EDHCSD currently has adequate recreation facilities to serve the needs of the existing population. There are 73 acres of developed park land, 20 acres of joint-use recreation area, 30 acres of dedicated but unimproved land, and 55.4 acres of nature area. Development of Bass Lake for recreation purposes would fulfill the standard for a lake that has public access for recreation use. The El Dorado Hills Golf Course is privately owned and currently accessed by the public and should be encouraged to remain available for public use.

El Dorado Hills Community Services District will need to optimize the use of all active recreation lands, playground areas, and open space/view shed areas district-wide to answer future recreation demands by CSD residents. Every available means will need to be employed to resolve anticipated deficiencies in sports field area by negotiating additional joint use agreements for use of playground areas on existing and future school sites with the Buckeye and Rescue School districts. Additional funding sources and methodologies are also being developed to provide for future recreation facility and program improvements to answer demands upon the district.

Georgetown Divide Recreation District. The Georgetown Divide Recreation District (GDRD) was created by the voters of the district on November 8, 1988, for the purpose of providing recreational sites, facilities, and programs for the residents of the district. The current estimated population of the district is between 9,000 and 10,000 residents. The GDRD was the first and has been the only County Recreation Zone of Benefit District to establish itself as an independent recreation district. The district is responsible for funding, managing, operating, and maintaining the five public parks within the plan boundaries. The GDRD is minimally funded by a "tax increment" and plans to pursue additional funding through a special parcel tax or other type of fee or assessment in the near future. The district is always in pursuit of available grant funding, and a minor amount of revenue will be realized from Quimby Act fees.

The primary objective of the GDRD is to establish and develop a local park site for each Georgetown Divide community as well as a regional park site and community center complex at a central site to serve all communities of the divide. The goal of the GDRD is to have a minimum of five acres of useable park area per 1,000 persons residing within the district boundaries.

GDRD operates three developed park sites and proposes to develop three more. The developed park sites are Georgetown Park, Beam Field and Garden Valley Park, and the proposed parks are Pilot Hill Park, Greenwood Park, and Airport Park. Georgetown Park, which is located north of Harkness Street, offers picnicking and day use. Nearby, the Georgetown Elementary School has baseball diamonds and a large playing field available to the public. Improvements at Beam Field, located in Georgetown, include a regulation-size softball field and a fenced tot lot. Garden Valley Park is operated under a joint-use agreement with Black Oak Mine Unified School District (BOMUSD) and GDRD. The four-acre park is developed for day use, and facilities include picnic areas, a tot lot, horseshoe pits, and a stage. Pilot Hill Park is not currently developed for recreational purposes although future uses may include a playing field and an historical interpretive center. The historic Bayley House and old barn are located on this parcel, but these structures are currently deteriorating and will need to be rehabilitated. Greenwood Park, located in Greenwood, is currently owned by the Bureau of Land Management and is leased to the BOMUSD. GDRD hopes to develop 30 to 40 acres of the total 180-acre site as a regional park that would include a community center and gymnasium, a playground, courts, and trails. Airport Park is a proposed park adjacent to the Georgetown Airport. Facilities at this park might include picnic areas and trails. A location is being sought for a park to serve the community of Cool.

In addition to the parks described above, there are recreational facilities in the Georgetown area that are maintained by the Georgetown Divide Public Utility District at the Lake Walton Reservoir where picnicking, fishing, and other day-use activities are offered.

There are currently nine acres of developed park land operated by GDRD. An additional 19 acres are secured but not improved, and 35 acres owned by BLM are proposed to be developed for recreation purposes.

Tahoe Paradise Resort Improvement District. Incorporated in 1960s, the Tahoe Paradise Resort is operated and maintained by the Tahoe Paradise Resort Improvement District, a semi-public agency. The land for the resort was donated by A. E. Wilson and George Baron when the town of Paradise was developed. The resort primarily provides recreation opportunities for the residents of Tahoe Paradise. To use the facility, members must pay an annual fee of \$17. Tahoe Paradise has a population of approximately 3,000 and is located approximately seven miles west of the South Lake Tahoe "Y." The El Dorado County Parks and Recreation Division oversees the management of the facility. The resort consists of 60 acres of land developed for recreational uses focused around a ten-acre lake. Swimming and sailboating are allowed on the lake. A trail circles the lake and there are tennis courts, playing fields, a tot lot, and picnic areas.

City Facilities

Placerville and South Lake Tahoe are the two incorporated cities in El Dorado County and both provide recreation sites and opportunities for the residents living in the city. In general, the parks and facilities offered by the cities range in size from the 62-acre Gold Bug Park in Placerville to the single-acre St. Francis of the Woods Park. Many neighborhood parks are associated with schools.

City of Placerville. The City of Placerville has a relatively large supply of parkland and enjoys the recreation opportunities afforded by being located in the heart of the Mother Lode. School play areas, private recreational resources, and recreational programs add to the wide choice of leisure activities available to residents. A total of 36 acres of developed parkland divided into five local parks is owned and managed by the city. The 61-acre Gold Bug Park is the largest public open space in the city. The park contains many relics of gold mining activities and functions primarily as an historic park. Lions Park (24 acres) is the most actively used park in the City. Currently, eight acres of the park have been developed with softball fields, tennis courts, play equipment, picnic facilities, and restrooms. Lumsden Park (five acres), Rotary Park, (four acres) and City Park (three acres) are all smaller community parks offering various recreation activities. The City also owns the Town Hall on Main Street and the Center Street parking structure. The Town Hall is used for many classes and other recreational activities. The upper level of the parking structure can be used during the weekends and the evenings for community activities such as dances or craft shows. El Dorado High School maintains the ten-acre Bennet Park which is owned by El Dorado County. This park includes baseball and softball fields, a football stadium, tennis courts, a picnic area, and a tot lot. Other public recreation areas are associated with Markham, Sierra, and Schnell schools.

Trails. Only two recreational trails have been developed in the City. One trail, a senior citizens par course, has been constructed in Bennet Park. The other trail is a one-mile bike lane striped along Ray Lawyer Drive between the Cosumnes River College and the County Government Center.

Because of steep topography and narrow streets throughout much of the City, potential bicycle lane areas are limited. Possible bicycle routes include downtown to Gold Bug Park, downtown to Schnell School, and a link between El Dorado High School and Markham School. Lions Park has adequate space for a jogging trail.

Needs

The amount of parkland in the city has remained constant for at least ten years; but because of residential growth in the Placerville Drive area, a new park facility is now needed. Currently there are plans for improvement of Lions Park to expand the amount of developed acreage. In addition, El Dorado County has developed plans for three parks near Placerville, one in

Diamond Springs, another adjacent to Gold Oak School, and the third in Coloma. If the Texas Hill Reservoir is approved, there have been proposals for a regional park in connection with the reservoir to be located along Weber Creek. The proposed area is only two miles south of Placerville and would mainly serve residents from the Placerville area.

The City of Placerville uses the State standard of five acres of developed land per 1,000 persons. The number of persons using City parkland is far greater than the City population. It is estimated that 40,000 persons living in the greater Placerville area use City parks, in part because there are no developed County-managed parks in the area. The City-owned parks, plus Bennet Park, total 36 acres of developed land. With such a large demand for parks, it is not surprising that the City parks show signs of overuse. Turf areas are badly worn from nearly continuous use (*Placerville, General Plan Background Report, 1987*). All baseball and soccer fields are fully scheduled each summer and are used during weekdays, evenings, and weekends. The two local softball fields cannot serve the 90 locally registered softball teams. The parks also have a shortage of turf areas for leisurely family-oriented use.

With the growth of girl's athletic programs, the El Dorado High School gymnasium is reaching capacity which greatly reduces its availability for use by the City Parks and Recreation Program. With the projected growth in population, demands for recreational activities will increase. In addition, it is expected that as more people move into Placerville with recreation-oriented lifestyles, the need for recreational facilities will increase at an accelerated pace.

City of South Lake Tahoe. The City of South Lake Tahoe operates a wide variety of park and recreation facilities and programs. The Recreation Element of the City of South Lake Tahoe provides for the development, utilization, and management of the recreational resources of the City, among which include parks, a golf course, riding and hiking trails, beaches, playgrounds, marinas, skiing areas, and other recreational facilities. Some recreational activities take place in dispersed areas without the benefit of developed facilities. These activities include hiking, riding, and cross-country skiing. Other activities require the use of developed facilities including campgrounds, picnic areas, visitor centers and overlooks, boat launching and marina facilities, golf courses, rental facilities, urban athletic, and playing fields.

The Community and Leisure Services Department (CLSD) plans, provides, and operates community and leisure services. The CLSD provides supervised recreation opportunities of good quality at minimal cost and assists the public in attaining optimum use of existing recreational facilities by working in cooperation with the Lake Tahoe Unified School District, Lake Tahoe Community College, and El Dorado and Douglas counties to maximize the resources of the community and reduce duplication of services.

The City coordinates with other organizations to assure future parks and recreation facilities are consistent with the needs of the community. Public and private concerns, including ski resorts, the U.S. Forest Service, and the Bureau of Land Management provide a large spectrum of recreational facilities and services.

The City owns and operates a number of small community parks as well as some larger park facilities.

El Dorado Recreation Area. The 57-acre El Dorado Recreation Area offers a camping complex, Scout Hall, beach and boating facilities, a community meeting room, a senior citizens center, and an art center.

Lake Christopher. Lake Christopher was purchased by the City in 1981 as part of the preservation plan of the Parkland and Open Space Fund. Lake Christopher Meadow is a 187-acre lake and stream environment zone providing excellent animal and bird habitat in need of protection. Recreation activities that do not conflict with the conservation focus of the park are allowed.

Regan Beach. The most popular beach in South Lake Tahoe has been Regan Beach which is approximately six acres. The City-owned and operated recreational facility is located west of Lakeview and U.S. Highway 50 and extends along the shoreline to Fresno Avenue. Regan Beach has ample parking, picnic facilities, play apparatus, a concession stand with rest rooms, a large turf area, flat sunbathing areas, trails along retaining walls, access to the lake, and a large swimming area protected by buoys. Regan Beach is one of the few locations in the Lake Tahoe Basin that allows direct and unobstructed public access to view the entire lake, fish from the bulkheads, enter the water, or just to park your vehicle along the edge.

Trails. The City has approximately 124 miles of bicycle trails, 15 miles of groomed cross-country ski trails, nature and interpretive trails at some facilities, jogging trails, and hiking trails.

Bijou Community Park. The site for the proposed Bijou Community Park was purchased by the City in 1982 through the Parkland and Open Space Fund. This area consists of an existing nine-hole golf course, a meadow, and adjacent wooded areas. A Bijou Community Task Force, consisting of representatives from the City Council, City staff, CLSC, and Planning Commission was created in 1984 to develop a list of activities and facilities for inclusion in the design of the park. The list includes:

- bike paths and bike trail system;
- walking paths and nature trails;
- fitness course;
- cross-country ski trails;
- nine-hole golf course and instruction center;
- park area:
 - horseshoes
 - picnic and shelter areas
 - rest areas
 - pickup games/sports areas
 - playground apparatus area
 - all-purpose courts
 - ponds;

- gazebo for art shows and other special events;
- recreational building for equipment checkout, supply storage, rest rooms, and concessions; and
- natural vistas to view Freel and Job's Peaks.

Tahoe Valley Multi-Use Area. An outdoor facility to provide day use for individuals and teams wishing to play soccer, softball, baseball, football, and free play is proposed for construction at the Tahoe Valley Elementary School. The facility would be called the Tahoe Valley Multi-Use Area.

Private Recreation Providers

Private recreation providers play an important role in the El Dorado County economy. The private recreation facilities having the greatest impact in terms of users and revenues are the golf courses, ski resorts, and river rafters. In addition, there are a number of private resorts and campgrounds that are owned and operated by private citizens.

Many of the privately operated recreation facilities are located on public land. As of 1988, all except two major campground sites in the Eldorado Forest operate under a concessionaire program. The U.S. Forest Service intends to continue the concessionaire program (USFS, 1986b). In addition, there are eight developed campgrounds in the forest that are not operated by the U.S. Forest Service, and a number of privately developed facilities are entirely or partially on Eldorado National Forest land. These facilities are authorized and managed under special use permits. There are two resorts on private land on Wentworth Springs Road, five along U.S. Highway 50 and eight adjacent to State Route 88. In addition, there are nine organization sites, two private camps, three private clubs, four winter sports sites, and 992 recreation residences.

Golf Courses. There are currently six golf courses in El Dorado County, and three more are being developed or are in the planning stage. The majority of these courses are in private ownership, but the public is allowed to play for a fee. The 9-hole, 18-acre public Sierra Golf Course is in Placerville. This course receives 25,000 to 30,000 users each year. Also in Placerville is the private Cold Springs Golf Course, a membership-owned course with 430 members who play approximately 40,000 rounds of golf annually. The Cold Springs Golf Club is not accepting new members. In El Dorado Hills, the 18-hole, privately owned golf course is open to the public; and approximately 90,000 rounds of golf are played there per year. Two additional private courses are planned for the El Dorado Hills Specific Plan area. A private golf course/country club is also located in Cameron Park, and approximately 46,000 rounds of golf were played on that course in 1989. Two public courses, the nine-hole Bijou Golf Course, and the 18-hole Lake Valley Golf Course are in South Lake Tahoe. These two clubs account for approximately 25,000 to 30,000 and 9,000 golfers, respectively.

All courses reported an increase in the number of golfers over the past few years. Judging from the high levels of use of the existing public courses, there is a strong demand for golf in the County.

Ski Areas. Three major ski areas, or portions thereof, are located in the eastern portion of El Dorado County: Sierra at Tahoe Ski Area, Heavenly Valley Ski Area, and Kirkwood Ski Area. Iron Mountain is another ski area located in El Dorado County. These ski areas attract thousands of people daily during the winter months. The popularity of the ski resorts, combined with travel to and from the Nevada casinos, are the major cause of traffic delays along U.S. Highway 50 in the winter months. The U.S. Forest Service is convinced that there is a demand for more downhill skiing in the northern Sierra. To this end, the U.S. Forest Service is examining proposals for expansion of two ski areas, Kirkwood and Sierra Ski Ranch. Potential expansions may entail additional capacity for an additional 500 persons at one time at Kirkwood and 2,000 persons at one time at Sierra at Tahoe, respectively.

Heavenly Valley is the largest ski resort in the County although only a portion of the ski area is located in California. Base facilities on both the California and Nevada sides of the area are on privately owned land; however, several day lodges and food service facilities situated at mid-level are located on National forest land. There have been an estimated 5,400 skiers at one time on the California side in El Dorado County.

Sierra at Tahoe is located 47 miles east of Placerville on U.S. Highway 50 and is completely within El Dorado County on land belonging to the U.S. Forest Service. The facility can currently serve approximately 7,000 skiers per day and is designated as a day-use facility. The proposed expansion plans call for development of two hotels with a combined total of 405 rooms, 200 condos, expanded ski runs, and additional ski lifts. At buildout, the expanded ski resort would be considered a year-round destination resort and would be able to accommodate 14,000 skiers. Because the expansion plan calls for development on 155 acres of private land, El Dorado County is also involved in the expansion proposal.

Kirkwood straddles El Dorado, Alpine, and Amador counties and is a full-service, year-round resort operating partially on National forest land. The resort includes condominiums and rental units. In the winter, there are more than 2,000 acres of skiable land and a cross-country skiing center with groomed trails. Daily winter capacity at Kirkwood is approximately 6,000 to 8,000 persons. During the summer, visitors can swim, fish, or boat on one of the lakes in the area, play tennis, hike, or rent mountain bikes, or ride horses.

Campgrounds. Numerous commercially operated campgrounds are located throughout the County, and several organizations provide group camping facilities for their members.

RECREATION AND TOURISM

In addition to the County residents who visit the various recreation facilities found in El Dorado County, many people living outside the County also visit these facilities during their leisure hours. Many of these "tourists" or visitors are attracted to the County because they wish to experience open space, natural scenery, and recreational activities that directly contrast to the usual, everyday spacial surroundings and activities they encounter in an urban environment.

Recreation sites of historical or archeological interest, though generally obscure to outlanders, hold considerable interest among those visiting local residents. "Uncommon" activities, or those not readily duplicated elsewhere, tend to generate the greatest amount of demand and visitation from regional and national visitors.

El Dorado County contains many scenic, historical, and recreational opportunities that bring visitors from well beyond the local area. At Marshall Gold Discovery State Historic Park, visitor origin data indicate that only one-third of the visitors are County residents. Nearly one-quarter are from Southern California metropolitan population centers, one-fifth are from the San Francisco Bay Area, and another 10 percent are from out-of-state (*California Department of Parks and Recreation, 1978*). Visitors are also attracted from a wide area to raft down the South Fork of the American River. According to a 1982 survey conducted by the El Dorado County Planning Department, only 17 percent of the rafters were from the three local counties (El Dorado, Placer, and Sacramento). Nearly one-half were from southern California and the remaining 28 percent were from elsewhere in California, or out-of-state.

It is possible that other natural or recreation resources in El Dorado County, if they were better known, more accessible or effectively interpreted, may be sufficiently rare or special to draw a larger number of visitors from afar.

Tourism, which is a form of recreation, is also big business in El Dorado County. People from the San Francisco Bay Area and the Sacramento area, who are drawn to the recreational, historical, or scenic resources of El Dorado County, contribute to the County's economic vitality. Scenic resources in El Dorado County including rolling grasslands, oak woodlands, pastoral landscapes, vistas of evergreen forests, alpine lakes, and historic structures are very important for both recreating residents and tourists alike. Although beautiful to look at, and some people do recreate by sitting or driving just to enjoy the view, these scenic resources also provide the basis for important recreation activities such as hiking, birdwatching, backpacking, and tours or visits to historic structures or working farms. It follows that the open space resources which are essential to the quality of life enjoyed in El Dorado County, also contribute to the continued vitality of visitor-based recreation opportunities and a more significant share of these lands need to be reserved for that vital purpose.

Following are brief descriptions of historic places of interest, as well as the agricultural resources, within the County that may be of interest to visitors.

Historic Resources

Unique historic resources are available in El Dorado County. Two major areas provide popular historic attractions: the Gold Country on the Western Slope and the High Sierra where Lake Tahoe provides the focal point.

On January 12, 1848, gold was discovered in California at Sutter's Mill in Coloma, El Dorado County, and the famous Gold Rush began. In camps everywhere up and down the gullies and canyons of the County, miners grubbed and mucked for the gold hidden in old tertiary banks. Panning for gold was later replaced by hard rock mining. The heart of the Mother Lode, El Dorado County, continues to attract visitors interested in the area's history, scenic beauty, and small villages. Historic U.S. Highway 50 provides access to many of the major historic sites in the County from Placerville to South Lake Tahoe. The highway itself follows the route of the Pony Express and was the first east-west road across the mountains. The "Bonanza Road," as U.S. Highway 50 was first called, led directly from Placerville to Virginia City, Nevada, where silver was discovered at the Comstock Lode in 1859. The highway passes through the American River Canyon, Echo Summit, South Lake Tahoe, and Carson City. As the Comstock Lode's riches panned out near the turn of the century, Lake Tahoe entered a slow period characterized by summer resorts and agricultural production. During this time, most of the summer resorts, such as Vikingsholm, Ehrman Mansion, and the Baldwin, Pope, and Valhalla estates were built.

The following is a partial listing of historical places of interest. For more detailed information, see the Cultural Resources section of the Natural Resources and Hazards chapter.

Cool is located on historic State Route 49. Once a stage stop on the Auburn-Georgetown Road, passengers in a stagecoach may have seen similar buildings during the time of the Gold Rush.

Greenwood was founded in 1848-49 by John Greenwood, son of the famous mountain man, Caleb Greenwood. The town is accessed by State Route 193. Some buildings of historical interest that were in the town in 1850-51 are the "Wish-Ton-Wish" Bowling Saloon, the Verandah, the Greenwood Cottages, and the Old Kentucky Exchange. The Nagler Hydraulic Mine, the Cederberg Mine, and the Bower Mine are all located north of the town.

Georgetown also lies along State Route 193 and was named in honor of George Phipps who founded the town in 1849. Following a disastrous fire in 1852, the citizens rebuilt the town with unusually wide streets to prevent further blazes from spreading. Several historic buildings are located in the town including the Whiteside Theater, built in 1869; the Shannon Knox House; Georgetown Hotel; and the American River Inn.

Pilot Hill, accessed by State Route 49, is known for the historic Bayley House, once a graceful, three-story, red brick mansion, built by Alcander Bayley in 1862. Pilot Hill is named for the hill that explorer John Fremont used as a landmark to guide his expeditions in 1844 from the Sierra to Sutter's Fort.

Coloma. Most of the community of Coloma is now James Marshall Gold Discovery State Historic Park. The Coloma gold strike at Sutter's Mill, just eight miles north of Placerville, started the famous "California Gold Rush" of 1849.

Lotus, a town that developed concurrently with Coloma, is located only one mile away from State Route 49. Historic sites in Lotus include the Sierra Nevada House III, the third inn to be built on this spot after its Gold Rush predecessors burned to the ground; the Red Uniontown Schoolhouse; the Old Uniontown Cemetery, where headstones date back to the early 1850s; and Adam O. Lohrey's Brick General Store, believed to include timbers cut at the original Sutter's Mill.

Placerville. The only city on the Western Slope of El Dorado County, Placerville or "Old Dry Diggin's," was also nicknamed "Hangtown" after citizens discouraged a gang of criminals by using the hanging tree in Elstner's hay yard. Incorporated as Placerville in 1854, the growing town defeated Coloma in an 1857 contest for the County seat. The restored 1912 County Courthouse still stands downtown. City government presides in the picturesque City Hall next door which includes the Old Roller Building, erected in 1859. There are many buildings of historic interest in the downtown, and visitors can tour a real gold mine in Gold Bug Park.

The largest single, annual, historical event in Placerville is Wagon Train Days, a three-day festival held in late June of each year. This event begins with the arrival of a wagon train from Nevada and continues with an arts and crafts fair, a rodeo, dancing, and ends with a parade and brunch.

Diamond Springs is located on the Old Carson Emigrant Trail and was named in 1849 for its crystal clear water. Historic buildings include the Wells Fargo Express office and the Louis LePetit store, built in 1857. On a hill above the town stands the I.O.O.F. Hall which was built in 1852 and is the oldest such hall in continuous use in California.

El Dorado. Located on Pleasant Valley Road, El Dorado was a rich placer- and quartz-mining area. A few early buildings survive including M.D. Hingman's Physicians Office and Drugstore and the 1857 Wells Fargo Express office, now the fire station.

Pollock Pines is the home of the annual Pony Express Re-Run Celebration, held every Fourth of July. A plaque at Sportsman's Hall marks the site of the 12-Mile House, a pony express and freight wagon stop.

Smith Flat is located on U.S. Highway 50 and was an early mining and lumber company. Abe Saul's popular stage stop, the Smith Flat House, was built in the 1860s. It is the best preserved way station along U.S. Highway 50 and has housed a post office for more than 130 years. The Smith Flat House is currently a restaurant and saloon.

In addition to its historic communities, the County hosts many activities celebrating the history of the County, some of which include:

- Old Coloma Theatre Melodrama;
- Annual Sternwheeler Races on Lake Tahoe;
- Georgetown Fiddle Contest;
- Pony Express Run;
- Camino Logging Day;
- Hangtown Rodeo; and
- Annual U.S. Highway 50 Wagon Train from Nevada to Placerville.

Agricultural Trails

El Dorado County possesses inherent recreation and open space characteristics related to agricultural production and ranch marketing, an activity where ranches and farms offer produce and crafts direct to consumers. Visitors to the County enjoy the scenic characteristics, picnic areas offered by most growers, and family-oriented atmosphere of working farms. The El Dorado Ranch Marketing and Rural Recreation Guide, 1990, is a useful guide to fresh produce and recreational activities. Ranches, farms, wineries and vineyards are scattered around the West Slope. A number of family-owned and operated wineries are generally open on weekends and by appointment. From September through December, "Apple Hill" in Camino offers apple picking, fresh cider, apple pies, and other goods. On the weekends following Thanksgiving, visitors and residents can cut their own Christmas trees on various ranches in Camino and other areas of the County.

ECONOMIC ISSUES

Because of its location, outstanding recreation opportunities and direct highway access to large centers of population, tourism, and recreation play an important role in El Dorado County's economy. Recreation is one of the three leading industries in the County. Visitors come from the San Francisco Bay Area, the Sacramento area, other parts of the country and the world to experience the wide range of recreational resources the County offers. The County is three to four hours driving time from the San Francisco Bay Area and one to two hours from the Sacramento area. These two metropolitan areas have a combined population of approximately 5.5 million people (4.5 million in the San Francisco Bay Area and more than one million in Sacramento). Because of the growing populations in these two areas and in the County, there are definite opportunities for increasing the number of visitors to El Dorado County.

Lake Tahoe, on the County's eastern edge, is a world-class destination attraction where various winter and summer sports are offered. Employment in the Tahoe Basin is oriented to the tourists who visit the area for the recreation opportunities available there. Although the casinos, located in Nevada, are the biggest employers for the City of South Lake Tahoe residents (USDA, 1988c), other important employers are local businesses and ski area operators. Most new jobs in the El Dorado County portion of the Basin are ski-related.

In addition to the direct economic gain related to tourism, recreational users also stimulate the local economy, create seasonal employment for County residents, and generate tax revenues. The El Dorado County Chamber of Commerce found that in 1985 (the most recent year for which figures are available), tourism expenditures in the County equalled approximately \$2.52 million; the annual payroll for businesses directly related to tourism was \$54 million, and transient occupancy taxes paid to the County equalled \$4.7 million. In addition, the annual payroll for businesses indirectly related to tourism, such as restaurants and service stations, totalled \$10,933 million (personal communication, Marjorie McCormick, Tourism Coordinator, El Dorado County Chamber of Commerce, May 1990). In the five years since 1985, the figures quoted above have undoubtedly increased.

Tourists and visitors to the diverse recreation facilities in the County, such as Marshall State Park and the South Fork of the American River, have a significant economic impact on the County. Based on research conducted by the State Department of Parks and Recreation, it is estimated that visitors tend to spend approximately \$5.80 per day within a 25-mile radius of the historic park. It is estimated that the approximately 500,000 annual visitors to Marshall Gold Discovery State Historic Park contribute roughly \$9 million to the local economy (the number of visitors multiplied by \$5.80 and the resulting figure multiplied by three, a multiplying factor to account for the number of times money changes possession within the County).

River recreation is big business in El Dorado County. Use of the lower stretch of the South Fork of the American River by licensed river rafting outfitters also contributes to the economies of local communities near the river put-in and take-out points. In an average year, commercial fares for rafting down the river with a licensed company total approximately \$6.4 million. Of course some of this money does not remain in the County because of insurance, equipment and other costs incurred by river rafting companies; but a large portion (perhaps as much as 80 percent) is spent within the County on payroll, rent, and food.

Although commercial fares provide the largest amount of money generated by river rafting, an estimated 60 to 70 percent of the 80,000 persons who raft down the river stay one to three days in El Dorado County in association with their raft trip. Motels, campgrounds, restaurants, and other visitor-oriented services also benefit from the river as a recreation source. In 1989, it was estimated that gross revenues for river use and ancillary economic factors amounted to approximately \$25 million.

RECREATION USE AND DEMAND

Use of Recreation Facilities

Based on existing information, it appears that all parks and recreation areas within El Dorado County, whether developed or undeveloped, receive a high degree of use. Unfortunately, few recreation providers within the County, with the exception of the U.S. Forest Service and the State Department of Parks and Recreation and larger public purveyors of recreation and associated services, keep records of annual use. However, during interviews with County and local recreation providers, the following facts became clear:

- Virtually all developed recreation facilities within the County, e.g., campgrounds, picnic areas, playgrounds, ball fields, marinas or boat launches, and turfed areas receive a high degree of use and are often overcrowded in the summer.
- Facilities such as softball diamonds and gymnasiums must be booked far in advance, and some teams and classes can not be accommodated by the current facilities.
- Most turfed areas show increasing signs of wear and overuse.
- Trails and bikeways, where they do exist, are well-used.
- Many County residents rely on recreation facilities owned and operated by the cities of Placerville or South Lake Tahoe or the U.S. Forest Service because no County recreation facilities exist in their recreation service area.

The U.S. Forest Service has conducted studies concerning recreation visitor days and the general use of the Eldorado Forest. Their findings were published in the Eldorado National Forest Land and Resource Management Plan, 1988. Although the U.S. Forest Service's findings do not specifically refer to County recreation facilities, the studies are of interest for a number of reasons. First, because the forest is located almost exclusively in El Dorado County, visitors to the forest also provide important revenues for the County. Second, the general magnitude of the number of visitors can be applied to County facilities especially when examining the future demand for parks. And finally, many visitors to the Eldorado Forest are County residents or people who pass through the County on their way to the forest. It is possible that these visitors might possibly choose to use more conveniently located County facilities, if they existed.

The U.S. Forest Service found that approximately three million recreation visitor days occur in the Eldorado Forest which does not include the Lake Tahoe portion of the National forest. Use of developed sites operated by the U.S. Forest Service has increased from 402,000 recreation visitor days in 1971 to 511,000 in 1974 and 546,000 by 1982; developed private-sector use has increased from 606,000 visitor days in 1971 to 918,000 in 1982. This is primarily because of the increase in winter sports activities, particularly downhill skiing. During the 11 years from 1971 to 1982, dispersed recreation, including wilderness use, has increased 23 percent from 1,494,000 to 1,839,500 recreation visitor days. Camping outside developed campgrounds is still the most popular dispersed use, followed by hunting, fishing, hiking, cross-country skiing, and riding. Cross-country skiing has increased markedly and is expected to experience one of the largest increases during the next decade. However, the biggest single shift in use has been a 33 percent increase in trail use. Back packers, equestrians, off-road vehicle users, and cross-country skiers are increasingly attracted to the scenic high country.

In the Eldorado Forest, increasing use at times exceeds existing forest capabilities. This problem is especially acute during peak summer weekends and following snow storms when large numbers of people travel to the mountains for snow play activity. Readily accessible existing sites that already experience overflow crowds are Ice House, Loon Lake, Wrights Lake, Caples Lake, Kirkwood Lake, and Silver Lake. In the past year, campgrounds near State Route 89 have also had unusually high numbers of turnaway days demonstrating the need for additional recreation facilities. In addition, a primary need for winter recreation is to increase the parking space available in areas where good snow conditions exist and to reduce the conflicts between the various competing users in these areas.

The vehicular use of forest roads and trails by off road vehicle (ORV) users has increased substantially. This use is currently managed in accordance with the Off-Road Vehicle Travel Plan, 1976, prepared by the USFS. ORV Travel Plan monitoring indicated there is a need to adjust use in some areas, to develop or extend some trails to form logical loops, and to delete some of the short dead-end routes.

There has been a large increase in the use of reservoirs for boating, water skiing, and fishing. Sailboating is popular on larger reservoirs such as Union Valley, Loon Lake, and Silver Lake. If this use continues to increase and conflicts occur with other users, it will be necessary to zone portions of the most popular lakes.

Demand for Recreation Facilities

A general indication of recreation demand for El Dorado County can be inferred from forecasts made by the State Department of Parks and Recreation Information System (PARIS). Recreation demand was projected for the years 1985 to 2000 (*Lake Valley State Recreation Area Plan, 1988*). PARIS is a database containing information relating recreation use and projected recreation demand. In PARIS, recreation demand is expressed in terms of "participation days" meaning one person's participation in a specific activity on a given day. If an individual participated in more than one activity on a single calendar day, one participation day is registered for each separate activity.

Based on PARIS projections, the graph shows the future participation days that will be demanded in El Dorado County for six recreational activities: golf, hiking and backpacking, lake and stream fishing, nature appreciation, picnicking, and snow sports. Of these activities, hiking and backpacking exhibits the highest projected demand. The second-highest projected demand is for picnicking, followed closely by snow sports.

Using these results and after analyzing use data, trail construction should be a high priority for the County Parks and Recreation Division.

The U.S. Forest Service has also made some projections concerning future demand for recreation facilities in the Eldorado National Forest. Undoubtedly, the proximity of the Eldorado National Forest to six million people four hours away makes the Eldorado National Forest a convenient place for recreation. As populations in the San Francisco Bay Area and the Sacramento area rise, there is a corresponding growth in demand for both developed and dispersed recreation opportunities. In the forest, demand for developed recreation sites is expected to increase about one percent per year (USDA, 1988c). There is also strong demand for dispersed recreation opportunities from visitors to the Basin and from the increasing resident population. Much of the means for accommodating more dispersed recreation involves improving public access.

There is continued pressure applied to provide developed and semi-developed sites and areas for use by special groups such as equestrians, motorcyclists, four-wheel vehicle drivers, snowmobilers, and cross-country skiers. In addition, the demand for trails of all kinds will increase in the future. Equestrians are especially interested in the development of new trailhead facilities. Over-snow travel is growing in popularity. There is also a demand for additional trailhead facilities for a variety of dispersed uses (equestrian use, motorcycle, four-wheel drive, mountain biking, cross-country skiing, snowmobile, snowplay, and rock climbing). In some cases, this may involve the acquisition of rights-of-way or lands and may, for winter sports, require the plowing of snow.

The demand for skiing is expected to increase at about two percent per year (USDA, 1988c). Both the U.S. Forest Service and the Tahoe Regional Planning Agency are committed to providing opportunities for the expansion of skiing as long as the adverse impacts are offset.

The U.S. Forest Service expects that use of developed sites will increase at a high rate. The opportunity exists for the Eldorado National Forest to increase capacity of existing developed facilities or construct new ones to meet demand. Existing sites have met past needs, but are nearing capacity, while use is projected to increase substantially. Although the mix of public, semi-public, and private uses may change, the land base represented by existing and potential recreation sites is expected to meet future demands on the forest.

SUMMARY

Almost countless opportunities for recreation exist in El Dorado County because of the Federal, State, local and private resources found there. Most recreation sites are resource-based such as campgrounds, reservoirs, and wilderness areas. Each year more land areas are developed for active recreation yet not enough are developed to fill the demand. Because there is an abundance of undeveloped open space in El Dorado County, residents express a desire for activity-based developed parks. As previously mentioned, Federal and State parks and campgrounds tend to be resource-related rather than developed for active recreation and are managed for the benefit of a national or State-wide user group rather than for the residents of El Dorado County.

Placerville and South Lake Tahoe, the two incorporated cities in El Dorado County, provide recreation facilities (110 and 153 acres of developed park land, respectively). However, these facilities are primarily for the use of City residents, with formal access by others generally resulting in non-resident fees being charged. The community service districts, recreation district, and other public entities also provide parkland developed for active recreation for the primary use and enjoyment of their entity residents; however, County residents living in the unincorporated portions of El Dorado County access these facilities as they do the two unincorporated cities.

As shown in Table 9-5, approximately 330 acres of existing parkland are available to serve the 82,339 Western Slope unincorporated area residents; and an additional 190 acres have been identified as future park land. Communities have expressed the need for aquatic centers; community centers for seniors, teens, and civic groups; more playing fields; and trails. Currently, no County parks exist to serve the 9,395 Eastern Slope unincorporated area residents. However, when completed, the proposed Golden Bear Park will supply 47 acres of developed recreation area for Eastern Slope residents. Based on the figures presented in Table 9-5, approximately 4.0 acres of park land per 1,000 unincorporated area residents currently exist. Potentially, 6.3 acres of park land per 1,000 residents on the Western Slope and 5.2 acres per 1,000 residents on the Eastern Slope may exist in the future.

Table 9-6 provides a description of park types and their characteristics. An analysis of park types operated by provider is presented in Table 9-7. Existing and unimproved park sites were divided into five different categories based on size, area served, and available facilities. The five categories are regional parks, rural community parks, urban community parks, urban area parks, and urban neighborhood parks.

As shown in Table 9-7, the County currently provides the most acreage of regional park land, consistent with its primary responsibility, whereas the community service districts and recreation district provide more acres of the smaller park types. A large proportion of land has been identified for activity-based parks but is not yet improved or developed with recreation facilities. Less than 50 percent of the total potential park acreage for rural community, urban community, and urban neighborhood park types is developed. For regional parks, 65 percent of the total potential park acreage is developed. Furthermore, there exists an insufficiency of activity-based parkland based on the County's standard of five acres per 1,000 population, the amount of land that has been identified, but not improved, may add to a perception that sufficient park land exists to serve County residents, whereas the opposite condition actually exists. The large number of acres of unimproved parkland suggests the need for a strategy to fund the improvement of these lands.

Progress also has not been made on the County-designated pedestrian and equestrian trail system or the bikeways system. Based on projections made by the U.S. Forest Service and the State Department of Recreation, it is expected that increasing numbers of residents will want access to trails for hiking, backpacking, biking, and equestrian activities. Bike riding in particular has increased in popularity with the advent of trail bikes capable of riding on steeper grades and unpaved trails.

As El Dorado County develops, the demand for community and regional recreation areas increases. New funding sources must be found or developed to expand the existing facilities, develop unimproved park lands, extend the trail system, and create bikeways.

**TABLE 9-5
PARKLAND ASSESSMENT PER 1,000 RESIDENTS**

	West Slope	East Slope	TOTAL
Unincorporated Area Residents ¹	82,339	9,935	91,734
Developed Parks (acres) ²	330	-	330
Developed Park Ratio (acres/1,000 residents)	4.0	-	-
Unimproved Parks (acres) ³	190	47	237
Total Park Ratio (acres/1,000 residents) ⁴	6.3	5.2	6.2

¹Unincorporated residents do not include those persons residing in Placerville or South Lake Tahoe.

²Developed parks are parks that have been developed for active recreation. Parks and open space areas where the primary purpose is the protection of natural resources have not been included. School joint-use sites and sites owned and operated by PG&E or EID have not been included.

³Unimproved parks are sites that have been identified by the recreation provider as a future developed park site or are parks that are currently under construction. Unimproved park sites have not necessarily been secured.

⁴The total park acreage is the sum of the developed and unimproved park acreage.

**TABLE 9-6
PARK TYPES**

Type	Acres	Serves	Typical Facilities
Regional Parks	45+	County	Sports fields, group picnic areas, playground, swimming area, trails, nature interpretive center
Rural Community Parks	10-44	Rural Community	Baseball diamonds, sports fields, lawn areas, playground, group picnic area, trails, swimming
Urban Community Parks	25-45	Urbanized Community	Multiple use, lighted sports fields, indoor athletic complex and/or, community activity center surfaced courts, competition/recreation swimming, picnicking, natural water feature, fishing, trails
Urban Area Parks	10-24	Urbanized Community	Baseball diamond, playground, turf areas, surfaced game area, picnic tables
Urban Neighborhood Parks	1-9	Neighborhood	Playground, turf areas, small surfaced games area, tot lot, picnic tables, benches

TABLE 9-7
ACRES OF PARK TYPE BY PROVIDER

	County ¹	Other Districts ²	Other ³	TOTAL
Regional Park				
Existing	171	53 ⁴	-	224
Unimproved	47	-	70	117
Rural Community Park				
Existing	-	-	45	45
Unimproved	63	35	10	108
Urban Community Park				
Existing	-	71	-	71
Unimproved	13	42	-	55
Neighborhood Park				
Existing	1	34	10	45
Unimproved	2	34	-	37
TOTAL ACRES	298	269	135	702

¹Parks under the jurisdiction of the County service area recreation advisory committees are included in the County average.

²Other districts include: Cameron Park Community Service District, El Dorado Hills Community Service District and Georgetown Divide Recreation District.

³The "Other" category includes providers who operate developed, activity-based recreation sites. The PG&E Forebay facility is included in this category.

⁴Forty-seven acres of the 53 acres represent lake water surface area.

TABLE 9-8
RECREATIONAL FACILITIES STANDARDS

Facility/Utility	Units/Population	Notes
Baseball	1/5,000	In sports complex
Basketball	1/5,000	Outdoor in community & regional parks Indoor in community centers
Equestrian Arenas	1/50,000	
Handball	1/20,000	Usually indoor
Picnic Tables	1/500	
Soccer	1/10,000	More with multi-use fields; locate at elementary and middle schools utilizing Joint Use Agreements when possible
Softball	1/5,000	
Swimming Pools	1/40,000	Preferably competition size
Tennis	1/2,000	Best in groups of 2, 4 or more; Some lighted
Volleyball	1/5,000	Sand volleyball as well

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PERSONS CONTACTED

1994

Craven Alcott. Director, Division of Parks & Recreation.

Chapter 10

ECONOMIC DEVELOPMENT

The Sierra Economic Development District (SEDD) has prepared an economic base analysis for El Dorado County, dated December 1994. This document will serve to provide the background information for the Economic Development Element and is provided here in its entirety.

SIERRA ECONOMIC DEVELOPMENT DISTRICT

A MODEL DISTRICT FOR CALIFORNIA

El Dorado County Economic Base Analysis

December 1994

SIERRA
NEVADA
PLACER
EL DORADO

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PART I:

**Introduction to
Economic Base Analysis**

A TOOL FOR LOCAL ECONOMIC DEVELOPMENT¹

Before a community can intelligently develop strategies for economic development, it should understand the nature of the local economy and the area's strengths and weaknesses as a location for economic activity. Economic base analysis provides a factual basis for economic development goal setting and strategy development.

The focus of economic base analysis is the so-called "basic" economy, or those activities that generate revenue inflows as a result of sales of goods or services to nonlocal markets.

The information resulting from this type of

¹ The discussion in this and the following section on the significance of the local economic base is extracted with permission from *Understanding Your Economy: Using Analysis to Guide Local Strategic Planning*, Mary L. McLean and Kenneth P. Voytek, American Planning Association, 1992.

analysis can be used to identify steps that a community might take to maximize strengths or minimize weaknesses in order to enhance prospects for economic growth.

The role of economic analysis in strategic planning is not to reveal the ultimate "fix" for a local economy, but to support rational and informed discussion about economic problems and possible solutions in order to reach consensus on preferred policy options.

Rather than attempting to influence location decisions on a firm-by-firm basis, forward-looking development agencies are trying to identify and nurture those sectors that can operate at a competitive advantage in the local area. Development strategy then becomes a matter of strengthening important local clusters of related and supporting industries, with explicit emphasis on policies that encourage market leadership and innovation.

SIGNIFICANCE OF THE LOCAL ECONOMIC BASE

The industries that account for the largest share of employment or earnings are not necessarily the same as those that underpin growth in the local economy. The industries that are most crucial to local economic growth are those that produce goods and services sold *outside* the local economy, generating an inflow of income. These industries are known as an area's "economic base" or "export base." They generate the income that sustains the "local serving" or "non-basic" sector of the economy -- firms such as restaurants, grocery stores, automobile repair shops, laundries, and so on.

In addition to exporting, local economies import goods and services that are demanded by local consumers and businesses but produced elsewhere. The extent and nature of a local economy's imports are also of interest for the

analysis, since there may be opportunities to substitute locally produced goods and services for those being purchased from outside the area.

How can the economic base of a local economy be identified? Previously it was thought that an area's economic base was synonymous with its manufacturing sector. Analysts divided local economies into their "basic" sectors -- manufacturing and extractive industries such as mining or agriculture -- and their local or service sector (all the rest). It is now widely recognized that such a division is misleading and inaccurate. For one thing, not all manufacturers export their products: some -- such as beverage bottlers and dairies or newspaper publishers -- serve primarily local markets. More importantly, the growth and restructuring of service industries in recent years has been accompanied by rising interregional trade in services. Clearly, service industries that sell their services outside of a local economy also represent part of an area's

economic base.

Probably the most accurate method of identifying a local economy's base is to conduct an area-wide business survey of all firms asking them to identify the percentage of their goods and services that are sold outside of the area.

Those with comparatively large shares of output sold outside the local area would constitute the local area's economic base. However, such a business survey is a major undertaking and results could be unreliable unless the response rate was quite high.

WHO CAN USE THIS REPORT

The economic base analysis is primarily intended to aid local officials articulate economic development strategies best suited to the opportunities and challenges of each local economy within the SEDD region. It is a tool used by the SEDD Board of Directors to set goals, objectives, and strategies each year as part of the Overall Economic Development Program (OEDP) process. It can be used by each agency or organization in the region's network of local economic development providers to better identify and address local industry trends and conditions in developing their own work programs. This analysis can help identify industries to target business retention and expansion strategies, and can help identify gaps in local economies to target business attraction (import substitution) efforts.

The report can be used by the private development community to aid in commercial property appraisal, industrial site location, market analysis, and other applications.

In short, the economic base analysis offers essential information for charting a course to enhance the region's competitive advantages in the global market.

Finally, economic analysis is obviously useful to economic development planners, but it is also an essential ingredient in other planning

endeavors. A land use plan that does not take into account local economic structure and trends will suffer in application.

Economic base analysis addresses such critical questions as the following:

- What is the current condition of the local economy?
- Compared to other areas, how has the local economy been performing? Has economic performance strengthened or slackened over time?
- What is the underlying structure of the local economy? Which industries account for the area's economic performance and condition?
- Which local industries appear to be in the strongest competitive position? Which in the weakest?
- Which sectors or industries are most important to the local economy in terms of employment and earnings?
- Is the structure of the local economy changing? If so, in what ways?
- How diversified is the local economy?
- Which sectors or industries are growing and which stagnating or declining? How do these trends compare to those elsewhere?

THE OVERALL ECONOMIC DEVELOPMENT PROGRAM PROCESS

This report offers an annual assessment of local economic conditions and is intended to support ongoing strategic planning to best utilize local economic development resources. The Overall Economic Development Program is a process that analyzes local conditions, identifies problems and opportunities, sets goals, designs strategies to achieve these goals, coordinates activities to implement the strategies, and evaluates accomplishments. The Sierra Economic Development District (SEDD) uses the OEDP process to guide its annual work program within the four-county SEDD region. However, the OEDP is first and foremost a statement of all local economic development efforts, and local officials are encouraged to make use of the OEDP process, including this report, in guiding local economic development efforts. The basic elements of the OEDP process include the following:

1. Assessment of the area and its economy:

A clearer understanding of the local economic situation is achieved by analyzing the local economy, identifying its strengths and weaknesses, determining the factors that contribute to these conditions, and assessing potential opportunities to induce change or to enhance existing institutions which show promise as foundations for economic development.

2. Establishment of goals and objectives:

On the basis of the analysis of the area's economy, local economic development goals and objectives can be established and ranked to address employment, income, fiscal conditions, or

² See *Overall Economic Development Program Guidelines for Economic Development Districts*, Economic Development Administration, U.S. Department of Commerce, May 1992.

quality of life issues. At this stage, opportunities and constraints associated with achieving established objectives will need to be identified, and all options for effective intervention evaluated. This evaluation marks the transition from problem definition to solution.

3. Articulation of development strategies:

The area's development strategy is the link between the up-front analysis of the area's economy and development potentials and the resulting programs, activities, and projects that are the product of the OEDP process. The development strategy identifies the means to reach stated objectives using available resources. The development strategy is a multiyear course of action.

4. Implementation:

On the basis of the analysis of the area's economy, local officials can decide how to capitalize on the area's assets. From these decisions, local officials can identify the actions and set priorities that are necessary to foster economic development. A procedure for selecting the best actions should assess the ideas for development programs, activities, and projects. The assessment should consider assumptions about trends in the area's economy, expected changes in economic factors, the OEDP goals, and criteria for the area's utilization of resources.

5. Evaluation:

Annual updates to the OEDP document summarize and assess the past year's activities and present new or modified program strategies.

The OEDP process must adopt a thoughtful and logical approach to long-range problems but also encourage early identification and implementation of short-range problem solutions. A successful planning process will formulate and implement a program that creates jobs, raises income levels, diversifies the economy, and improves the quality of life. Also, it will stabilize and expand the tax base of the local economy.

METHODOLOGY AND DATA SOURCES

This report uses a variety of analytical techniques to provide a better understanding of the local economic base. In addition to analyzing basic economic indicators available at the local level such as population growth, total employment, the unemployment rate, total earnings, earnings per worker, payroll, total income, income per capita, and transfer payments, this report utilizes two analytical tools commonly used to assess the structure and performance of local economies. *Location quotient analysis* is used to identify local industry strengths that constitute the local economic base. *Shift-share analysis* looks at the performance of local industries over time relative to state or national trends. This comparison can help identify local industries poised for additional growth as well as those experiencing long-term decline or facing uncertainty from changes in the global economy.

The analysis relies heavily on data from the U.S. Bureau of Economic Analysis' Regional Economic Information System (REIS), an annual accounting of earnings, employment, and income at the county level. There is a two-year time lag to compile and make this information available in electronic format. Data for the year 1992 are the most current available for this year.

Employment and payroll data from the California Employment Development Department (EDD) is also used to track current employment and unemployment rates and make industry wage comparisons. This year's economic base analysis makes use of a special run of EDD employment data by zip code to assess the local economic base at the subregional level.

Other data sources include the U.S. Bureau of the Census, the California Department of Finance, the California Trade and Commerce Agency, and SEDD reports.

HOW THIS REPORT IS ORGANIZED

The 1994 El Dorado County Economic Base Analysis report is intended to serve two purposes: 1) present a portrait of the local economy to aid local officials and economic development providers in responding to local opportunities and constraints and 2) provide a detailed database of local industry structure and trends for use by public and private-sector analysts. Each section of the report looks at the county's economy from a particular angle using different levels of analysis.

This year's report is organized into three parts. Part I provides the context for economic

base analysis within strategic economic development planning. Part II presents the findings of this year's analysis for El Dorado County. Part III is a special supplement to this year's report profiling the economic base of the distinct subregional economies that together constitute the county's economic base. The appendix includes detailed industry tables for each economic subregion, industry and consumer spending multipliers for El Dorado County and statewide prepared by the California Trade and Commerce Agency, a glossary of terms, and references to economic development strategic planning information.



PART II:

**The El Dorado County
Economic Base**

REGIONAL ECONOMIC SETTING

THE LOCAL ECONOMY IN REGIONAL CONTEXT

El Dorado County is situated in the northern Sierra Nevada east of the Sacramento metropolitan region. The county is considered part of the Sacramento Metropolitan Statistical Area (MSA) and is greatly influenced by the Sacramento regional economy. The county lies along the business and market corridor extending from the San Francisco Bay Area to Lake Tahoe. The influx of urban refugees from the Bay Area and Sacramento, as well as the seasonal recreation and tourism market, are two key manifestations of the local impact of demographic and socioeco-

nomie trends within the greater northern California region.

The county is intimately tied to the vicissitudes of the California economy, not the least due to proximity to the state capital and the government sector dominating the Sacramento economy. El Dorado County is linked directly and indirectly to the global economy through California's strategic placement within the Pacific Rim.

The next three sections elaborate a little further on regional factors influencing the El Dorado County economy.

THE SIERRA ECONOMIC DEVELOPMENT DISTRICT

El Dorado County is one of four northern Sierra Nevada counties comprising the Sierra Economic Development District (SEDD), and shares certain geographic and locational characteristics with its neighbors to the north and south. SEDD was created in 1969 through a Joint Powers Agreement among El Dorado, Nevada, Placer, and Sierra Counties. SEDD principle mandate is to address unemployment and underemployment within the northern Sierra Nevada.

The Sierra Economic Development District encompasses a four-county area in the Northern Sierra Nevada covering 5,091 square miles, approximately equal in size to Connecticut. The four counties falling within the District include El Dorado, Nevada, Placer, and Sierra. The District includes a portion of the Sacramento metropolitan area and encompasses the California portion of the Lake Tahoe Basin.

The geography of the Sierra Nevada mountain range dominates and defines the region,

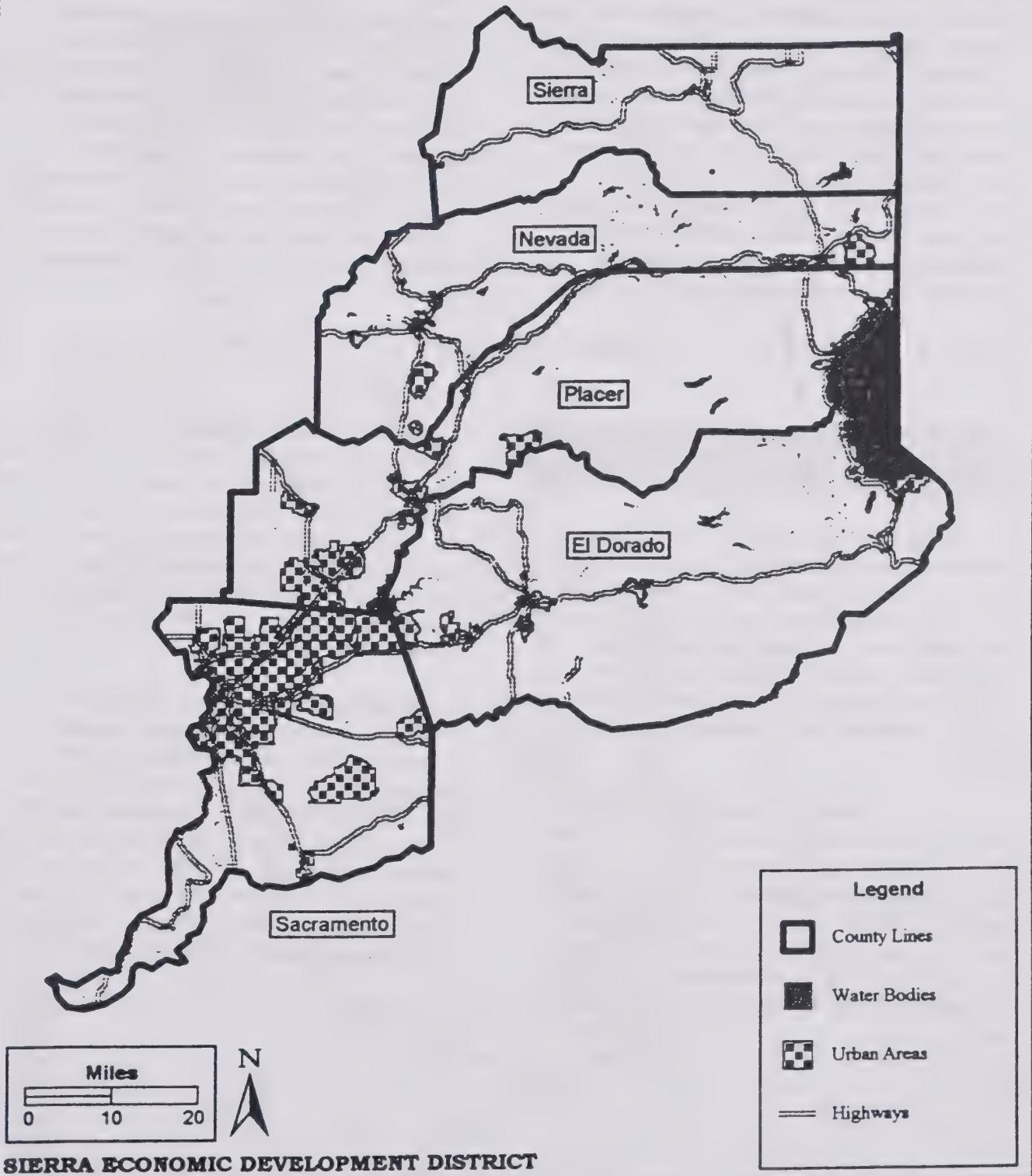
bisecting all four counties. Roughly 80 percent of the District lies west of the crest of the Sierra Nevada. There are four distinct geographic subregions in the District: 1) a portion of the Sacramento Valley below 300 feet elevation in western El Dorado and Placer Counties, 2) the lower foothills below 2,000 feet elevation in El Dorado, Placer, and Nevada Counties, 3) the upper foothills and High Sierra with elevations above 2,000 feet, and 4) the Lake Tahoe Basin on the eastern slope of the Sierra. Not all four regions are represented in every county within the District. Nevada and Sierra Counties do not have elevations below 300 feet, and Sierra County in particular is characterized by forested mountain and alpine valleys.

Interstate 80, a national east-west transportation link, cuts through the region, traversing the Sierra Nevada at Donner Pass at an elevation over 7,000 feet. Highway 49, the "Golden Chain" highway, traverses the region from north to south, connecting all four counties and the string of county seats and historic mining communities dotting the foothills along the western slope of the Sierra.

FIGURE II-1a

The Sierra Economic Development District and Sacramento County

(The Sacramento MSA includes Sacramento, Placer, and El Dorado Counties)



THE SEDD REGION'S RELATIONSHIP TO CALIFORNIA AND NEVADA

Much of the SEDD region on the western slope of the Sierra is heavily influenced by demographic and economic dynamics in the Sacramento metropolitan region. The significance of Interstate 80 as an interstate commerce and travel corridor extends the influence of the San Francisco Bay area and, to a lesser extent, the Reno metropolitan area into the region's economy. Recreation and tourism, the influx of "urban refugees," urban California's reliance on the Sierra Nevada's natural resources, and the demographic spillover from the Sacramento metropolitan area are key external factors influ-

encing local economic development.

So, too, is California's position in the national and global economies. Though closely tied to the flows of economic activity driving growth in the Pacific Rim economies, the Golden State continues to lag behind national economic recovery. The acceleration of California's changing demographic profile holds implications for northern Sierra Nevada communities, even as the region has attracted much of the flow of higher income migrants within the state. Declining average income levels and increasing demand for social services within California will continue to strain state government, and by extension, local government fiscal resources.



LOCAL ECONOMIES IN THE NORTHERN SIERRA NEVADA

The SEDD region, and El Dorado County within it, is not characterized by a monolithic regional economy comprised of closely-tied homogenous communities spread across the northern Sierra Nevada. Rather, the region is an amalgam of distinct local economies more closely tied to larger state, national, and even global economies that exert tremendous local influence.

Valley and foothill communities within the commute-shed of the Sacramento metropolitan area owe a substantial portion of their population and personal income levels to this government sector dominated economy. These communities have become increasingly diversified even as many retain a "bedroom community" relationship relative to the dominant Sacramento economy.

The Tahoe Basin economy in California responds to cyclical fluctuation in California and national destination resort markets as well as to seasonal demand in the ski industry serving northern California and western Nevada. Spillover from the gaming industry in Nevada complements these markets on the California side of the Tahoe Basin and moderates the effects of a seasonal recreation market.

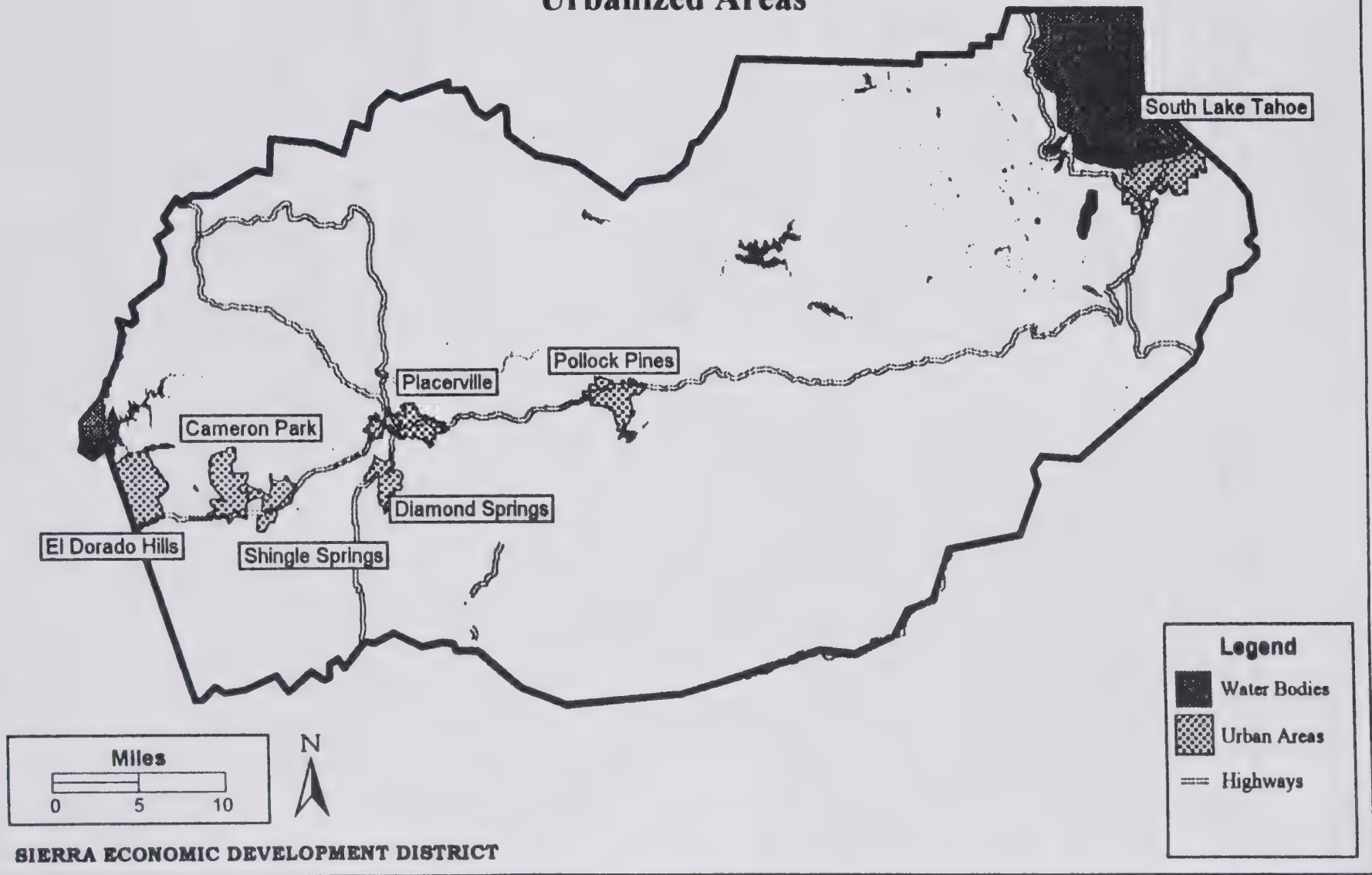
High Sierra communities remain closely tied to resource extraction and nature recreation industries. These sectors are heavily influenced by state and national policy affecting the predominantly public land ownership in the High Sierra. The larger communities in this subregion remain largely reliant on a monoculture economy based on lumber production, an industry that is itself becoming increasingly consolidated or monopolistic on the supply side of the market.



FIGURE II-1b

El Dorado County

Urbanized Areas



COUNTY POPULATION

2

Dramatic local population growth has been a defining phenomenon in the northern Sierra Nevada over the last two decades. In-migration, primarily from urban areas elsewhere in the state, has brought additional development capital in the form of personal wealth and talent into local communities. The economic development implications of this local demographic shift are mixed. On the one hand, increased personal wealth and talent can be the catalysts for small business startups as well as contribute to local consumer spending. On the other hand, increased demands for public services and facilities from new residents accustomed to urban amenities strains the capacity of rural service and infrastructure systems.

El Dorado County experienced dramatic population growth during the 1970s, nearly doubling in growth during this period at a 6.9 percent annualized growth rate (Figure II-2b). This growth rate slowed to almost half during the 1980s, still significantly above the state average

during this period. The county's population has continued to grow at more than twice the growth rate for the state as a whole during the 1990s, with much of the recent growth occurring in unincorporated areas. County population growth during the recessionary period of the early 1990s has remained strong, approaching annual growth rates experienced during the 1980s. The disparity between the county and state population growth rates during the 1990s is indicative of the continued attraction of El Dorado County to urban migrants in the face of a sluggish state-wide economic recovery.

The median age in El Dorado County is projected to continue its gentle upward climb over the next decade, leveling off at about 38 years of age by 2005 (Figure II-2a). Senior citizens are projected to account for an ever-increasing share of the local population.



FIGURE II-2a

EL DORADO COUNTY POPULATION AGE PROJECTIONS

Age Cohort	Percentage of total population								
	1980	1985	1990	1995	2000	2005	2010	2015	2020
Under 18	25.9%	24.8%	26.5%	27.1%	26.3%	25.3%	24.8%	25.0%	25.5%
18-64	64.2%	64.7%	61.7%	60.4%	61.1%	61.9%	61.5%	59.6%	57.4%
Over 64	9.9%	10.6%	11.8%	12.5%	12.6%	12.8%	13.6%	15.4%	17.3%
Median Age	31.5	33.1	35.2	36.7	37.6	37.7	37.1	36.8	37.2

Source: California Department of Finance, Demographic Research Unit,
1993 Series Population Projections (Report P-3)

FIGURE II-2b**EL DORADO COUNTY POPULATION GROWTH**

Jurisdiction	Census Counts				Population Estimates					Annualized Population Growth			
	1950	1960	1970	1980	1990	1991	1992	1993	1994	1970-80	1980-90	1990-94	1993-94
El Dorado County	16,207	29,390	43,833	85,812	123,900	131,700	136,300	140,900	144,000	6.9%	3.7%	3.8%	2.2%
Placerville	3,749	4,439	5,416	6,739	8,225	8,525	8,625	8,750	8,825	2.2%	2.0%	1.8%	0.9%
South Lake Tahoe	-----	-----	12,921	20,681	21,300	22,050	22,500	22,800	23,050	4.8%	0.3%	2.0%	1.1%
Unincorporated	12,458	24,951	25,496	58,392	94,400	101,100	105,100	109,400	112,100	8.6%	4.9%	4.4%	2.5%
SEDD Region (thousands)	80.2	109.5	150.2	257.8	380.6	396.3	410.3	423.7	434.7	5.6%	4.0%	3.4%	2.6%
California (thousands)	10,586.2	15,717.2	19,971.1	23,667.9	29,558.0	30,321.0	30,982.0	31,522.0	31,961.0	1.7%	2.2%	2.0%	1.4%
United States (thousands)	152,271	180,671	205,052	227,726	249,900	252,671	255,462	257,908	260,430	1.1%	0.9%	1.0%	1.0%

Notes:

1. Population counts and estimates are for the resident or civilian population.
2. California Department of Finance estimates for 1990 were used instead of the April 1990 census figures to permit comparisons with estimates for 1991-94. Department of Finance estimates are made for January 1 of each year. Estimates for 1/1/94 are provisional.
3. U.S. population counts and estimates are given for July 1 of each year, except for 1994, which is as of June 1.
4. The annualized population growth rate is reported for greater accuracy over the average annual growth rate.

Sources:

1. Census counts from the U.S. Department of Commerce, Bureau of the Census
2. Annual estimates of total population from California Department of Finance, Demographic Research Unit (Report E-1).

COUNTY EMPLOYMENT AND UNEMPLOYMENT

Rapid employment growth in El Dorado County has resulted from dramatic population growth, yet local jobs have not kept pace, resulting in significant out-commuting to job markets

elsewhere. This has created a significant jobs/housing imbalance, and western El Dorado county remains largely a bedroom community within the Sacramento MSA.

EMPLOYMENT

Long-term employment growth in El Dorado County reflects growth throughout the SEDD region (excepting Sierra County), where population and employment growth far outpaced growth nationally or even within the rest of the state on average. The county added 2.5 percent to its employment base over the recent 1990-92 recessionary period, even as employment nationwide grew a negligible one-fifth of a percent,

and the state's employment base shrank by 3.1 percent (Figure II-3a). The county's 2.5 percent employment growth during this period was the lowest within the SEDD region, which averaged 4.8 percent. The county's employment growth during the downturn in the most recent business cycle (1979-82) also averaged well below the average for the SEDD region and slightly below the low percentage growth in the state's employment base as well.

UNEMPLOYMENT

Unemployment in El Dorado County, as in the rest of the SEDD region, has dropped significantly over the long-term. The county's unemployment rate dropped below the state and national unemployment rates in 1985, remaining lower than these until 1992 and 1993, when it rose above the national rate but remains lower than the state, which is lagging behind the nation

in emerging from recessionary conditions (Figure II-3b). Still, the county's annual average unemployment rate grew more than the state or national rates during the most recent recessionary period from 1990-93, experiencing the largest increase in the unemployment rate of any of the four counties in the SEDD region.



FIGURE II-3a**EL DORADO COUNTY EMPLOYMENT GROWTH****A. Total employment**

Region	1973	1979	1982	1990	1992
El Dorado County	19,442	29,363	30,375	51,343	52,617
SEDD Region	63,086	97,728	105,510	179,837	188,540
California	9,808,182	12,409,007	12,871,208	17,028,808	16,495,347
United States	98,237,200	112,963,200	114,152,400	138,981,300	139,289,100

B. Percentage change in employment

Region	Previous Cycle 1979-90	Downturn 1979-82	Recovery 1982-90	Recent Period 1990-92
El Dorado County	74.9%	3.4%	69.0%	2.5%
SEDD Region	84.0%	8.0%	70.4%	4.8%
California	37.2%	3.7%	32.3%	-3.1%
United States	23.0%	1.1%	21.8%	0.2%

C. Annualized rate of employment growth

Region	Previous Cycle 1979-90	Downturn 1979-82	Recovery 1982-90	Recent Period 1990-92
El Dorado County	5.2%	1.1%	6.8%	1.2%
SEDD Region	5.7%	2.6%	6.9%	2.4%
California	2.9%	1.2%	3.6%	-1.6%
United States	1.9%	0.3%	2.5%	0.1%

Notes:

1. The annualized employment growth rate is reported for greater accuracy over the average annual growth rate.
2. The years 1973, 1979, and 1990 represent peak years of previous national business cycles.
The year 1992 represents the most currently available data.

Source:

U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System

FIGURE II-3b**EL DORADO COUNTY UNEMPLOYMENT RATE****A. Annual unemployment rate**

<u>Region</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
El Dorado County	9.0%	9.2%	10.0%	12.6%	9.8%	8.2%	6.7%	5.8%	4.8%	4.6%	4.3%	4.3%	6.3%	8.1%	8.2%
California	6.2%	6.8%	7.4%	9.9%	9.7%	7.8%	7.2%	6.7%	5.8%	5.3%	5.1%	5.6%	7.5%	9.1%	9.2%
United States	5.8%	7.1%	7.6%	9.7%	9.6%	7.5%	7.2%	7.0%	6.2%	5.5%	5.3%	5.5%	6.7%	7.4%	6.8%

B. Percentage point change in unemployment

<u>Region</u>	<u>Previous Cycle</u> <u>1979-90</u>	<u>Downturn</u> <u>1979-82</u>	<u>Recovery</u> <u>1982-90</u>	<u>Recent Period</u> <u>1990-93</u>
El Dorado County	-4.7%	3.6%	-8.3%	3.9%
California	-0.6%	3.7%	-4.3%	3.6%
United States	-0.3%	3.9%	-4.2%	1.3%

C. Average unemployment rate during stages in business cycle

<u>Region</u>	<u>Recent Cycle</u> <u>1979-90</u>	<u>Downturn</u> <u>1980-82</u>	<u>Recovery</u> <u>1983-90</u>	<u>Recent Period</u> <u>1991-93</u>
El Dorado County	7.4%	10.6%	6.1%	7.5%
California	7.0%	8.0%	6.7%	8.6%
United States	7.0%	8.1%	6.7%	7.0%

Source: California Employment Development Department, Annual Planning Information reports.

COUNTY EARNINGS ANALYSIS**4**

Total earnings in El Dorado County from 1973-92 grew at over twice the rate for the state as a whole, and more than four times the national rate. Total earnings in the county continued to increase by 2.8 percent during the current 1990-92 recessionary period, well below the SEDD regional average of 5.4 percent, but still above the 2.3 percent growth nationwide and the 1.6 percent drop in statewide earnings (Figure II-4a). Even as total earnings have grown substantially, largely reflecting the dramatic population growth experienced in the northern Sierra Nevada foothills over the past 20 or more years, earnings per worker (adjusted for inflation) has declined much more significantly than declines in state or national earnings per worker averages. From 1973-92, earnings per worker within the county declined almost 10 percent, higher than the 8.2 percent decline experienced for the SEDD region as a whole, and significantly higher than the 5 percent drop nationwide and the 3.2 percent drop within the state. Earnings per worker in the county have actually nudged up 0.3 percent during the recent 1990-92 recessionary period, but this compares to a 2.1 percent increase nationwide and a 1.6 percent increase within the state. Finally, at \$21,459, average 1992 earnings per worker within the county fell well below the national average of \$26,531 or the state average of \$29,571. The disparity between local and state earnings per worker is compounded when the higher cost of living experienced by California residents is figured into the equation.

Western El Dorado County's position as a bedroom community within the greater Sacra-

mento metropolitan region is dramatically illustrated by the percentage of earnings garnered by residents commuting to jobs and owned businesses outside the county. Close to half of all earnings garnered by El Dorado County residents in 1992 was derived from employment and business ownership outside the county (Figure II-4b). Locally generated earnings, which increased by 222 percent from 1969-90 (constant 1992 dollars), still have not kept pace with earnings brought in from outside the county, which increased by over 400 percent during this period. However, this trend was reversed during the recent 1990-92 recessionary period, when locally-generated earnings increased by 2.8 percent while the increase in earnings brought in from outside the county was negligible.

The significant portion of local earnings attributed to out-commuting demonstrates the reliance of El Dorado County on jobs and business ownership outside the county within the greater Sacramento metropolitan region, the Lake Tahoe Basin, and elsewhere.

Perhaps even more significant from the standpoint of local job creation and the jobs/housing balance, the high percentage of local earnings from out-commuting also reflects the lack of a sufficient high wage, high salary local employment base to support the cost of living of a significant segment of the county's population.



FIGURE H-4a**EL DORADO COUNTY EARNINGS****A. Total earnings and earnings per worker, selected years**

Region	1973		1979		1990		1992	
	Total earnings (\$000)	Earnings per worker (dollars)	Total earnings (\$000)	Earnings per worker (dollars)	Total earnings (\$000)	Earnings per worker (dollars)	Total earnings (\$000)	Earnings per worker (dollars)
El Dorado County	461,255	\$23,725	622,872	\$21,213	1,098,014	\$21,386	1,129,099	\$21,459
SEDD Region	1,567,530	\$24,848	2,231,130	\$22,830	4,079,029	\$22,682	4,300,172	\$22,808
California	299,528,764	\$30,539	358,777,636	\$28,913	495,809,249	\$29,116	487,780,924	\$29,571
United States	2,742,511,090	\$27,917	2,992,200,070	\$26,488	3,611,123,412	\$25,983	3,695,429,000	\$26,531

B. Percentage changes in earnings, by period

Region	Long-term, 1973-92		Prior cycle, 1973-79		Recent cycle, 1979-90		Recent period, 1990-92	
	Total earnings	Earnings per worker	Total earnings	Earnings per worker	Total earnings	Earnings per worker	Total earnings	Earnings per worker
El Dorado County	144.8%	-9.6%	35.0%	-10.6%	76.3%	0.8%	2.8%	0.3%
SEDD Region	174.3%	-8.2%	42.3%	-8.1%	82.8%	-0.6%	5.4%	0.6%
California	62.8%	-3.2%	19.8%	-5.3%	38.2%	0.7%	-1.6%	1.6%
United States	34.7%	-5.0%	9.1%	-5.1%	20.7%	-1.9%	2.3%	2.1%

Notes:

1. Change in industry earnings over time period based on constant 1992 dollars using the U.S. consumer price index (CPI-U).
2. The years 1973, 1979, and 1990 reflect peak years of previous business cycles. The year 1992 represents the most currently available data.

Source:

U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System

FIGURE II-4b**EL DORADO COUNTY COMMUTER EARNINGS**
(constant 1992 dollars - in thousands)

Region	1969	1979	1990	1992
Earnings by place of work	\$341,334	\$622,872	\$1,098,014	\$1,129,099
Personal contribution to SSI (subtract)	17,486	33,368	77,014	82,726
Commute earnings adjustment (add)	157,740	450,594	836,257	838,260
Earnings by place of residence	\$481,588	\$1,040,099	\$1,857,257	\$1,884,633
Percentage of earnings from out-commuting	32.8%	43.3%	45.0%	44.5%

Notes:

1. Earnings include all wage, salary, and proprietors' earnings. Earnings by place of work include all employment or business ownership within the county for residents and non-residents alike. Earnings by place of residence include all earnings by county residents from employment or business ownership inside or outside the county.
2. Earnings based on constant 1992 dollars using the U.S. consumer price index (CPI-U).
3. The years 1969, 1979, and 1990 reflect peak years of previous business cycles. The year 1992 represents the most currently available earnings data.

Source:

U.S. Dept. of Commerce, Bureau of Economic Analysis, Regional Economic Information System

COUNTY INCOME ANALYSIS

Total personal income in El Dorado County grew by over 300 percent during the previous three business cycles (1969-92) in keeping with a 220 percent increase in population during this period (Figure II-5). This compares with a 95 percent increase in total personal income in California and a 75 percent increase nationwide.

Though the county continues to demonstrate modest gains in total personal income during the recent recessionary period, local personal income *per capita* dropped 5 percent between 1990-92, exceeding the statewide average decline in per capita personal income during this period. National per capita personal income remained essentially unchanged during this period. Local per capita personal income in 1992 was \$19,729, eight percent less than the state average and two percent less than the national average.

Retirement and disability payments grew by about 560 percent from 1969-92, compared to around 190 percent for California and the nation as a whole. This reflects a dramatic increase in the retiree population in El Dorado County over the past two decades. This increase in retirement payments was the largest by far within the SEDD region, almost twice the second highest increase occurring in Nevada County during this period. Retirement and disability payments accounted for 10 percent of total personal income within El Dorado County in 1992.

Total local dividends and interest has gained at more than three times the state or national rate since 1969. Recent declines in local dividends and interest reflect declines for California as a

whole, which has lost a greater percentage of total dividends and interest than the nation from 1990-92.

Unemployment compensation in the county grew by 163 percent during the recent 1990-92 recessionary period, larger than the 125 percent increase statewide or 94 percent nationwide. This comparatively larger local increase in unemployment compensation is significant considering that statewide unemployment compensation includes the hard hit South Coast Basin (Los Angeles, San Diego, etc.) as well as other pockets of severe unemployment and dislocation. Unemployment within the county reached its lowest point in decades in 1990, at 4.3 percent, and grew to 8.1 percent, nearly double, by 1992. This accelerated local unemployment rate over a short period accounts for much of the dramatic increase in unemployment compensation. As reported above, unemployment in El Dorado County continued to hover between state and national unemployment rates during 1992-93. Unemployment compensation in 1992 accounted for less than one percent of total local personal income, about the same as state and national percentages.

Locally, other transfer payments including medical benefits, income maintenance benefits such as AFDC and food stamps, and veterans benefits remain consistently lower than state and national averages, accounting for just over 5 percent of total personal income compared to 8 percent state- and nationwide.



FIGURE II-5

EL DORADO COUNTY PERSONAL INCOME ANALYSIS

Region	Distribution of personal income				Change in personal income		
	1969	1979	1990	1992	1969-92	1979-90	1990-92
EL DORADO COUNTY							
Net earnings by place of residence	73.2%	70.8%	69.8%	69.1%	291.3%	78.6%	1.5%
Dividends, interest, and rent	13.5%	15.4%	16.5%	14.8%	355.5%	94.0%	-8.2%
Transfer payments:							
Retirement & disability	6.2%	8.6%	8.7%	9.8%	558.5%	84.7%	15.0%
Unemployment compensation	1.6%	0.9%	0.4%	0.9%	140.7%	-26.0%	163.2%
Health, welfare, & other	5.6%	4.4%	4.6%	5.3%	298.5%	93.0%	17.8%
Total personal income	100.0%	100.0%	100.0%	100.0%	314.4%	81.2%	2.4%
Per capita personal income (dollars)	\$15,238	\$18,220	\$20,779	\$19,729	29.5%	14.0%	-5.1%
SEDD REGION							
Net earnings by place of residence	70.7%	68.2%	67.7%	67.8%	274.6%	82.1%	2.8%
Dividends, interest, and rent	14.8%	16.5%	18.3%	16.3%	330.2%	103.4%	-8.6%
Transfer payments:							
Retirement & disability	7.2%	9.5%	8.8%	9.4%	409.0%	70.1%	10.2%
Unemployment compensation	1.3%	0.8%	0.4%	0.9%	167.0%	-22.8%	162.1%
Health, welfare, & other	5.9%	5.1%	4.9%	5.6%	270.2%	76.8%	18.2%
Total personal income	100.0%	100.0%	100.0%	100.0%	290.9%	83.3%	2.7%
Per capita personal income (dollars)	\$14,821	\$18,428	\$21,433	\$20,624	39.1%	16.3%	-3.8%
CALIFORNIA							
Net earnings by place of residence	75.5%	72.1%	70.0%	69.1%	78.4%	36.5%	-1.8%
Dividends, interest, and rent	14.4%	14.9%	16.7%	15.1%	105.5%	57.1%	-9.6%
Transfer payments:							
Retirement & disability	4.8%	6.6%	6.4%	7.0%	184.3%	35.8%	8.1%
Unemployment compensation	0.5%	0.4%	0.4%	0.8%	224.1%	27.9%	124.9%
Health, welfare, & other	4.8%	5.9%	6.5%	7.9%	219.6%	54.8%	20.8%
Total personal income	89.9%	87.0%	86.7%	84.3%	94.9%	40.6%	-0.5%
Per capita personal income (dollars)	100.0%	100.0%	100.0%	100.0%	24.3%	9.3%	-3.7%
UNITED STATES							
Net earnings by place of residence	77.3%	72.7%	67.4%	67.2%	52.0%	18.8%	2.3%
Dividends, interest, and rent	13.5%	13.9%	17.8%	16.1%	107.8%	63.7%	-7.2%
Transfer payments:							
Retirement & disability	4.9%	7.3%	7.7%	8.1%	187.3%	34.1%	7.6%
Unemployment compensation	0.3%	0.5%	0.4%	0.8%	349.0%	3.8%	93.9%
Health, welfare, & other	4.0%	5.5%	6.7%	7.9%	245.9%	54.1%	20.9%
Total personal income	100.0%	100.0%	100.0%	100.0%	74.8%	28.1%	2.6%
Per capita personal income (dollars)	\$14,577	\$17,378	\$20,038	\$20,105	37.9%	15.3%	0.3%

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System

LOCAL INDUSTRY STRUCTURE AND GROWTH

6

This section looks at changes in total local employment and earnings among industry sectors and over time within these sectors. The eleven sectors comprising the local economy are considered. The current condition of each sector and its performance over time is analyzed. This

analysis provides the next level of detail in assessing local economic health and structure. Later sections will assess the local economy in still further detail on an industry by industry basis.

INDUSTRY EMPLOYMENT

Employment decline in El Dorado County in the farm, mining, manufacturing, transportation and public utilities, finance, insurance and real estate, and government sectors mostly tracked state and national trends since 1969 (Figure II-6a).

Local employment in the mining, transportation and public utilities, and finance, insurance and real estate sectors experienced particularly steep declines over this period.

The local manufacturing sector stabilized somewhat during the 1979-90 business cycle, gaining 2.3 percent in employment even as the state as a whole lost 21.5 percent and the nation 25.3 percent of manufacturing jobs over this period. This modest gain has been offset by losses during the recent recessionary period, when local employment in manufacturing declined by 11.2 percent from 1990-92, compared with a 8.6 percent loss statewide and a 5.7 percent loss nationwide.

Employment in the construction sector in El Dorado County grew by nearly 50 percent from 1969-79, compared with a 7.5 percent increase within the state and a 3.3 percent decrease nationwide. During the 1979-90 business cycle, construction employment in the county grew by another 36.2 percent, compared with a 14.4 percent increase within the state and essentially no net growth nationwide. The construction industry in the county has been hard hit during

the recent recessionary period, shrinking 18.5 percent between 1990 and 1992.

In 1992, the year for which the most recent data are available, retail and service sectors accounted for 52.3 percent of the county's total employment, as compared to 47.6 percent for the state and 45.4 percent for the nation (Figure II-6b).

Construction accounted for nearly 10 percent of the local employment base, more than twice the percentage state- or nationwide. By contrast, manufacturing accounted for only 4.7 percent as compared to 12 percent and 13.4 percent for the state and nation, respectively.

Though accounting for only 3.2 percent of the county's employment base in 1992, the wholesale trade sector has experienced dramatic growth relative to modest growth or decline state- and nationwide since 1969. Wholesale trade was the strongest local performer during the 1990-92 period, growing by 23.3 percent even as state and national employment in this sector continued to decline.

The sectors of the local economy experiencing net employment growth during the most recent recessionary period, as indicated by data available up to 1992, included wholesale trade (23.3 %), retail trade (1.1 %), services (5.2 %), and government (6.3 %). All other sectors experienced a decline in employment.

The 6.3 percent growth in local government

and government enterprise employment during the 1990-92 period outpaced the 3.2 percent growth in this sector statewide, while nationally government employment grew by less than one

percent. Federal, state, and local government employment growth during this period reversed long-term declines in government employment experienced between 1969-90.

INDUSTRY EARNINGS

Long-term decline in total earnings within the farm, mining, finance, insurance and real estate, and government sectors shadowed employment decline in these sectors from 1969-90 (Figure II-6a). With the exception of earnings in the mining sector, which has continued to decline much faster than state or national trends, total earnings within each of these sectors has rebounded during the recent recessionary period. Total earnings in the farm and finance, insurance and real estate sectors have increased between 1990-92 even as employment in these sectors has continued to decline, indicating recent gains in earnings per worker within these sectors.

Long-term gains in total earnings within the construction and services sectors tracked long-term gains in employment; however, earnings have not kept pace with employment gains, indicating declining earnings per worker over the long-term within these sectors.

The sectors of the local economy experiencing net total earnings growth during the most recent recessionary period, as indicated by data available up to 1992, included farm (12 %), wholesale trade (21.5 %), retail trade (2.6 %), fi-

nance, insurance and real estate (11.7 %), services (1.6 %), and government (8.0 %).

Along with the farm and finance, insurance and real estate sectors, total earnings increased marginally faster relative to employment gains within the retail and government sectors over this period, indicating some recent gains in earnings per worker within these sectors.

By contrast, a 5.2 percent increase in services sector employment during the 1990-92 period was met with only a 1.6 percent increase in total earnings, indicating declining earnings per worker within this sector. The services sector represented 31.5 percent of the county's total employment in 1992, by far the largest local employment sector (Figure II-6b).

While the retail and services sectors represented 52.3 percent of the local employment base in 1992, they accounted for only 44.7 percent of local total earnings. The three sectors accounting for a larger share of total local earnings than local employment included manufacturing, transportation and public utilities, and government. These sectors accounted for 22.1 percent of total local employment.

COMPARING INDUSTRY EMPLOYMENT & EARNINGS TRENDS

Though the manufacturing sector's share of total local employment has dropped over the long-term from 1979-92, its share of total local earnings has increased. Government is the only other local sector to exhibit this long-term trend

toward fewer and higher paying local jobs.

Retail trade is the only local sector to exhibit a clear long-term trend toward more yet lower paying jobs.

FIGURE II-6a**EL DORADO COUNTY INDUSTRY GROWTH PATTERNS****A. Percentage in Employment by Sector**

Industry Sector	1969-79			1979-90			1990-92		
	County	State	U.S.	County	State	U.S.	County	State	U.S.
Farm	-46.7	-44.1	-49.6	-29.6	-33.6	-31.6	-5.7	-2.2	-4.4
Nonfarm									
Agriculture, Forestry, Fishing	61.8	70.8	93.5	131.0	7.0	33.5	-3.8	3.5	5.0
Mining	-80.9	-24.0	-15.4	-38.6	-14.2	-26.7	-17.4	-6.9	-8.7
Construction	49.6	7.5	-3.3	36.2	14.4	-0.5	-18.5	-17.2	-8.5
Manufacturing	-33.0	-36.6	-40.7	2.3	-21.5	-25.3	-11.2	-8.6	-5.7
Transportation & Public Utilities	-21.1	-21.1	-10.2	-27.8	-9.2	-4.6	-1.2	0.4	-0.3
Wholesale Trade	29.8	8.0	6.0	71.2	3.1	-3.7	23.3	-1.9	-1.1
Retail Trade	11.0	5.5	11.9	0.6	0.4	5.4	1.1	-0.4	-0.2
Finance, Insurance & Real Estate	-28.3	10.3	17.1	-33.1	-4.7	2.0	-2.1	0.0	-1.1
Services	29.1	61.7	59.8	13.6	27.7	30.9	5.2	5.8	5.1
Government & Gov. Enterprises	-24.3	-28.1	-13.0	-14.8	-13.5	-7.0	6.3	3.2	0.9
All Sectors	97.2	37.9	24.3	74.9	37.2	23.0	2.5	-3.1	0.2

B. Percentage Change in Earnings by Sector

Industry Sector	1969-79			1979-90			1990-92		
	County	State	U.S.	County	State	U.S.	County	State	U.S.
Farm	-39.3	1.3	-33.2	-79.0	-35.4	-26.8	12.0	-16.7	-5.6
Nonfarm									
Agriculture, Forestry, Fishing	11.1	22.8	9.1	129.1	13.7	25.4	-9.9	5.1	5.7
Mining	-46.4	32.3	73.4	-60.8	-40.6	-46.6	-36.6	7.4	-1.0
Construction	17.5	11.9	2.1	32.9	-0.7	-11.9	-13.3	-18.1	-11.4
Manufacturing	-17.6	-10.3	-9.6	9.5	-17.7	-23.6	-3.7	-5.1	-3.7
Transportation & Public Utilities	32.8	-0.3	8.1	-44.0	-17.9	-12.1	-9.6	2.0	-0.2
Wholesale Trade	-14.0	11.7	11.7	17.8	0.3	-2.4	21.5	-2.0	-1.8
Retail Trade	2.9	-5.1	-5.7	-13.0	-6.4	-4.6	2.6	-2.8	-2.1
Finance, Insurance & Real Estate	-12.7	12.6	5.9	-48.8	-4.1	17.3	11.7	3.4	6.4
Services	11.6	20.7	16.4	17.5	36.4	43.7	1.6	5.4	4.4
Government & Gov. Enterprises	-12.0	-16.0	-4.6	-4.4	-4.8	4.5	8.0	5.1	1.3
All Sectors	82.5	33.9	26.4	76.3	38.2	20.7	2.8	-1.6	2.3

Notes:

1. Change in industry earnings over time based on constant 1992 dollars using the U.S. consumer price index (CPI-U).
2. The years 1969, 1979, and 1990 reflect peak years of the previous national business cycle. The year 1992 represents the year for which the most current data were available.

Source:

U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System

FIGURE II-6b

EL DORADO COUNTY INDUSTRIAL STRUCTURE

A. Percentage of Total Employment by Sector

Industry Sector	1979			1990			1992		
	County	State	U.S.	County	State	U.S.	County	State	U.S.
Farm	2.7	2.4	3.3	1.9	1.6	2.3	1.8	1.5	2.2
Nonfarm									
Agriculture, Forestry, Fishing	0.7	1.5	0.8	1.6	1.6	1.0	1.5	1.7	1.1
Mining	0.4	0.4	1.0	0.2	0.3	0.7	0.2	0.3	0.7
Construction	8.8	4.7	5.2	12.0	5.4	5.2	9.8	4.4	4.7
Manufacturing	5.2	16.7	19.0	5.3	13.1	14.2	4.7	12.0	13.4
Transportation & Public Utilities	3.8	4.7	5.0	2.7	4.2	4.7	2.7	4.3	4.7
Wholesale Trade	1.5	4.9	5.0	2.6	5.0	4.8	3.2	4.9	4.8
Retail Trade	20.4	15.8	15.7	20.5	15.9	16.6	20.8	15.8	16.5
Finance, Insurance & Real Estate	14.0	9.0	7.5	9.3	8.5	7.7	9.2	8.5	7.6
Services	26.3	23.5	21.0	29.9	30.1	27.5	31.5	31.8	28.9
Government & Gov. Enterprises	16.3	16.5	16.4	13.9	14.3	15.3	14.7	14.7	15.4

B. Percentage of Total Earnings by Sector

Industry Sector	1979			1990			1992		
	County	State	U.S.	County	State	U.S.	County	State	U.S.
Farm	1.4	2.5	2.0	0.3	1.6	1.4	0.3	1.3	1.4
Nonfarm									
Agriculture, Forestry, Fishing	0.5	0.8	0.5	1.1	0.9	0.6	1.0	1.0	0.7
Mining	0.5	0.7	1.8	0.2	0.4	0.9	0.1	0.5	0.9
Construction	13.5	6.7	6.7	18.0	6.6	5.9	15.6	5.4	5.2
Manufacturing	7.8	21.2	25.4	8.6	17.4	19.4	8.3	16.5	18.7
Transportation & Public Utilities	7.1	7.0	7.6	4.0	5.7	6.7	3.6	5.8	6.6
Wholesale Trade	2.3	6.3	6.6	2.7	6.4	6.5	3.2	6.2	6.4
Retail Trade	17.5	10.8	10.2	15.2	10.1	9.8	15.7	9.8	9.6
Finance, Insurance & Real Estate	5.8	6.4	5.8	3.0	6.1	6.8	3.3	6.3	7.2
Services	24.3	21.5	18.0	28.6	29.3	25.8	29.0	30.8	27.0
Government & Gov. Enterprises	19.2	16.2	15.5	18.4	15.4	16.2	19.8	16.2	16.4

Note: The years 1979 and 1990 reflect peak years of previous national business cycles.
The year 1992 represents the year for which the most current data were available.

Source: U.S. Department of Commerce, Bureau of Economic Analysis,
Regional Economic Information System

LOCAL INDUSTRY EMPLOYMENT AND PAYROLL



This section presents detailed employment and payroll information for the most recent calendar year (1993). Average annual employment and payroll, as well as wage and salary comparisons, are analyzed here at the 2-digit Standard Industrial Classification (SIC) industry level. Up to 70 different industries are described at this level depending on the size of the local economy.

The services sector by far accounted for the largest industry share of establishments, employment, and payroll in El Dorado County (Figure II-7a). The services sector accounted for 37 percent of total employment but only 34 percent of total payroll.

The retail trade and government sectors represent the second and third largest local industry sectors. Retail trade accounted for 25 percent of total employment but only 17 percent of total payroll. Government accounted for 10 percent of total employment and 14 percent of total payroll.

Local private industry sectors that contribute a higher proportion to local payroll than local employment include mining, construction, manufacturing, transportation and public utilities, wholesale trade, and finance, insurance, and real estate. These sectors represent higher-paying, value-added industries, yet account for just 27 percent of the local employment base.

Figure II-7b presents a more detailed comparison of industry wage and salary levels on the

basis of payroll dollars per employee. This table identifies specific industries within each sector that contain higher-paying, value-added employment. The last column in the table indicates the combined wage and salary levels of each industry relative to the county average payroll per employee level of \$21,741. Figure II-7b also indicates industries with a significant seasonal employment component.

Figure II-7c identifies the local industry sectors contributing the most *value-added employment* in the county. This includes industries with a higher payroll per employee average than the countywide payroll per employee average. The average payroll per employee in El Dorado County was \$21,741 in 1993. This includes both private-sector and government payrolls.

The highest wage and salary industries are presented in Figure II-7d.

This analysis only identifies industries providing greater than local average wage and salary levels. Not all employment within each of these industries will be above county average wage and salary levels. Nor does all the value-added employment identified in this analysis constitute primary wage earner jobs. Average wage and salary levels within the county remain well below state averages. Still, this analysis suggests which industries offer the best opportunity to live and work locally.



TABLE II-7a

**INDUSTRY EMPLOYMENT AND PAYROLL SUMMARY
EL DORADO COUNTY, 1993**

Industry Sector	Establish- ments	Employ- ment	Annual Payroll	Share of Total Estab.	Share of Total Employ.	Share of Total Payroll
Agriculture	159	531	\$6,656,059	4.0%	1.7%	1.0%
Mining	3	36	\$1,265,546	0.1%	0.1%	0.2%
Construction	616	2,037	\$58,313,099	15.4%	6.6%	8.6%
Manufacturing	168	1,719	\$49,971,087	4.2%	5.5%	7.4%
Transportation & Public Utilities	120	1,508	\$49,513,326	3.0%	4.9%	7.3%
Wholesale Trade	164	1,049	\$26,571,876	4.1%	3.4%	3.9%
Retail Trade	743	7,798	\$116,086,827	18.6%	25.1%	17.2%
Finance, Insurance, & Real Estate	272	1,581	\$37,260,588	6.8%	5.1%	5.5%
Services	1,642	11,511	\$232,418,110	41.2%	37.1%	34.4%
Nonclassifiable	36	81	\$1,576,897	0.9%	0.3%	0.2%
Government	57	3,161	\$94,593,188	1.4%	10.2%	14.0%
Totals	3,985	31,038	\$674,808,702	100.0%	100.0%	100.0%

Notes:

1. Annual figures are averages derived from four quarterly reporting periods.
2. Payroll includes salary, wage, and other labor income, but does not include proprietors' income.

Source:

California Employment Development Department, Labor Market Information Division, ES 202 records

FIGURE II-7b**INDUSTRY EMPLOYMENT AND PAYROLL COMPARISON
EL DORADO COUNTY, 1993**

Page 1 of 3

Industry	Establish- ments	Employ- ment	High Seasonality	Annual Payroll	Payroll Per Employee	Percent of County Avg.
AGRICULTURE						
Agriculture production – crops	72	206	Seasonal	\$1,679,484	\$8,163	38%
Agriculture production – livestock	7	9	Seasonal	\$90,196	\$10,022	46%
Agriculture services	72	303	Seasonal	\$4,744,129	\$15,670	72%
Forestry	9	13		\$142,250	\$10,942	50%
MINING						
Mining – nonmetallic minerals	3	36	Seasonal	\$1,265,546	\$35,400	163%
CONSTRUCTION						
General building contractors	299	609		\$17,093,731	\$28,092	129%
Heavy construction	32	427		\$15,299,577	\$35,851	165%
Special trade contractors	285	1,002		\$25,919,791	\$25,881	119%
MANUFACTURING						
Food & kindred products	8	55		\$828,506	\$15,202	70%
Apparel & fabric products	3	20		\$216,172	\$10,809	50%
Lumber & wood products	51	759		\$25,083,045	\$33,037	152%
Furniture & fixtures	4	40		\$636,790	\$16,121	74%
Paper & allied products	3	18		\$345,849	\$19,763	91%
Printing & publishing	33	377		\$6,204,226	\$16,457	76%
Chemicals & allied products	4	34		\$4,361,181	\$128,270	590%
Rubber & misc. plastics	3	13		\$262,981	\$20,626	95%
Stone, clay, glass, & concrete	7	85		\$2,190,874	\$25,851	119%
Fabricated metal	8	66		\$1,706,943	\$26,060	120%
Industrial machinery & equipment	23	69		\$2,009,292	\$29,333	135%
Electronic equipment	7	34		\$1,132,745	\$33,813	156%
Transportation equipment	4	22		\$547,048	\$25,444	117%
Instruments & related products	5	76		\$3,277,303	\$43,122	198%
Miscellaneous manufacturing	6	55		\$1,168,132	\$21,434	99%
TRANSP. & PUBLIC UTILITIES						
Transit & passenger transportation	6	74		\$1,529,008	\$20,593	95%
Trucking & warehousing	38	235	Seasonal	\$5,456,630	\$23,195	107%
U.S. Postal Service	17	239		\$7,924,941	\$33,124	152%
Water transportation	7	92	Seasonal	\$1,528,471	\$16,659	77%
Air transportation	6	15		\$268,338	\$18,506	85%
Transportation services	18	54		\$718,217	\$13,300	61%
Communications	10	142		\$5,036,539	\$35,531	163%
Electric, gas, & sanitary services	19	658		\$27,051,182	\$41,142	189%
WHOLESALE TRADE						
Wholesale trade – durable goods	84	532		\$13,189,039	\$24,803	114%
Wholesale trade – nondurable goods	81	517		\$13,382,837	\$25,898	119%

INDUSTRY EMPLOYMENT AND PAYROLL COMPARISON EL DORADO COUNTY, 1993

Page 2 of 3

Industry	Establish- ments	Employ- ment	High Seasonality	Annual Payroll	Payroll Per Employee	Percent of County Avg.
RETAIL TRADE						
Building materials & garden supplies	52	316		\$5,301,046	\$16,762	77%
General merchandise stores	9	415		\$5,680,740	\$13,689	63%
Food stores	82	1,711		\$35,314,156	\$20,646	95%
Automotive dealers	81	854		\$20,905,980	\$24,494	113%
Apparel & accessory stores	59	414		\$6,223,527	\$15,051	69%
Furniture & home furnishings	59	273		\$6,034,267	\$22,144	102%
Eating & drinking places	236	3,101		\$26,820,860	\$8,650	40%
Miscellaneous retail	165	716		\$9,806,251	\$13,696	63%
FINANCE, INSUR. & REAL EST.						
Depository institutions	35	396		\$7,595,849	\$19,206	88%
Nondepository institutions	19	98		\$3,963,935	\$40,552	187%
Securities & commodities	8	8		\$247,166	\$31,892	147%
Insurance	29	482		\$12,981,509	\$26,961	124%
Insurance agents, brokers, & services	43	117		\$2,672,303	\$22,938	106%
Real estate	133	471		\$9,580,957	\$20,353	94%
Holding & investment offices	6	11		\$218,869	\$20,360	94%
SERVICES						
Hotels & other lodging	113	1,480		\$17,867,228	\$12,072	56%
Personal services	72	249		\$2,846,716	\$11,433	53%
Business services	117	597		\$9,866,088	\$16,519	76%
Car repair, services, & garages	98	341		\$6,813,641	\$19,967	92%
Miscellaneous repair services	29	83		\$1,684,158	\$20,414	94%
Motion pictures	31	179		\$1,555,326	\$8,713	40%
Amusement & recreation services	71	1,157	Seasonal	\$18,076,227	\$15,623	72%
Health services	229	2,383		\$61,706,894	\$25,900	119%
Legal services	50	129		\$3,369,282	\$26,220	121%
Educational services	35	3,581	Seasonal	\$81,989,061	\$22,894	105%
Social services	79	504		\$7,409,440	\$14,701	68%
Membership organizations	35	123		\$1,973,169	\$16,042	74%
Engineering, management, & related	116	443		\$14,215,984	\$32,072	148%
Private households	564	243		\$1,992,611	\$8,217	38%
Miscellaneous services	5	21		\$1,052,285	\$50,713	233%
NONCLASSIFIABLE						
Nonclassifiable establishments	36	81		\$1,576,897	\$19,528	90%

INDUSTRY EMPLOYMENT AND PAYROLL COMPARISON EL DORADO COUNTY, 1993

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Industry	Establishments	Employment	High Seasonality	Annual Payroll	Payroll Per Employee	Percent of County Avg.
GOVERNMENT						
Executive, legislative, & general	5	735	Seasonal	\$18,563,958	\$25,248	116%
Justice & public safety	20	906		\$31,531,551	\$34,822	160%
Public finance & taxation	1	96		\$2,955,585	\$30,707	141%
Human resources	4	430	Seasonal	\$12,089,923	\$28,116	129%
Environment & housing	19	852		\$24,871,985	\$29,210	134%
Economic development	9	143		\$4,580,186	\$32,142	148%
County totals and averages	3,985	31,038		\$674,808,702	\$21,741	100%

Notes:

1. Annual figures are averages derived from four quarterly reporting periods.
2. Payroll includes salary, wage, and other labor income, but does not include proprietors' income.
3. An industry is considered to have a significant seasonal employment component when either first quarter (winter) employment or third quarter (summer) employment is either less than 80 percent or more than 120 percent of the average annual employment for that industry. Exceptions are industries exhibiting a clear trend of employment growth or decline over the 1993 reporting period, as well as industries where employment counts are too small to gauge seasonal employment variations.
4. "Payroll per employee" does not represent full-time, permanent wage or salary levels since employment and payroll figures reflect all part- and full-time, temporary and permanent employment. For this reason, payroll per employee figures will be less (in some cases considerably less) than actual wage and salary levels. These figures are presented for industry comparison purposes only.
5. County total figures include unreported employment and payroll from private industries with less than three establishments. Separate employment and payroll data for these industries are not reported to avoid disclosure.

Source:

California Employment Development Department, Labor Market Information Division

FIGURE II-7c**VALUE-ADDED EMPLOYMENT BY SECTOR
EL DORADO COUNTY, 1993**

Rank	Industry Sector	Value-added Industries	Value-added Employment
1	Services	6	7,215
2	Government	6	3,162
3	Construction	3	2,038
4	Manufacturing	8	1,145
5	Retail Trade	2	1,127
6	Wholesale Trade	2	1,049
7	Finance, Insurance, and Real Estate	4	705
8	Transportation and Public Utilities	3	616
9	Mining	1	36
10	Agriculture	0	0
10	Nonclassifiable	0	0
	Totals	35	17,093

Notes:

1. "Value-added" employment includes local wage and salary employment above the \$21,741 countywide payroll per employee average.
2. Annual figures are derived from four quarterly reporting periods.

Source:

Cal. Employment Development Department, Labor Market Information Division

FIGURE II-7J

HIGHEST WAGE AND SALARY INDUSTRIES EL DORADO COUNTY, 1993

Industry	Sector	Employment	Payroll Per Employee	Percent of Average Payroll per Employee
Chemicals and allied products manufacturing	Manufacturing	34	\$128,270	590%
Miscellaneous services	Services	21	\$50,713	233%
Instruments and related products manufacturing	Manufacturing	76	\$43,122	198%
Electric, gas, and sanitary services	Services	658	\$41,142	189%
Nondepository financial institutions	F.I.R.E.	98	\$40,552	187%
Heavy construction	Construction	427	\$35,851	165%
Communications	T & PU	142	\$35,531	163%
Mining -- nonmetallic minerals	Mining	36	\$35,400	163%
Justice and public safety (government)	Government	906	\$34,822	160%
Electronic equipment manufacturing	Manufacturing	34	\$33,813	156%
U.S. Postal Service	T & PU	239	\$33,124	152%
Lumber and wood products manufacturing	Manufacturing	759	\$33,037	152%
Economic development (government)	Government	143	\$32,142	148%
Engineering, management, and related services	Services	443	\$32,072	148%
Securities and commodities	F.I.R.E.	8	\$31,892	147%
Public finance and taxation (government)	Government	96	\$30,707	141%
Industrial machinery & equipment manufacturing	Manufacturing	69	\$29,333	135%
Environment and housing (government)	Government	852	\$29,210	134%
Human resources (government)	Government	430	\$28,116	129%
General building contractors	Construction	609	\$28,092	129%
Insurance	F.I.R.E.	482	\$26,961	124%
Legal services	Services	129	\$26,220	121%
Fabricated metal manufacturing	Manufacturing	66	\$26,060	120%
Health services	Services	2,383	\$25,900	119%
Wholesale trade -- nondurable goods	Wholesale	517	\$25,898	119%
Special trade contractors	Construction	1,002	\$25,881	119%
Stone, clay, glass, and concrete manufacturing	Manufacturing	85	\$25,851	119%
Transportation equipment manufacturing	Manufacturing	22	\$25,444	117%
Executive, legislative, and general government	Government	735	\$25,248	116%
Wholesale trade -- durable goods	Wholesale	532	\$24,803	114%
Automotive dealers	Retail	854	\$24,494	113%
Trucking and warehousing	T & PU	235	\$23,195	107%
Insurance agents, brokers, and services	F.I.R.E.	117	\$22,938	106%
Educational services	Services	3,581	\$22,894	105%
Furniture and home furnishings stores	Retail	273	\$22,144	102%

Notes:

1. The highest wage and salary industries are above the \$21,741 countywide payroll per employee average.
2. Annual figures are averages derived from four quarterly reporting periods.
3. Payroll includes salary, wage, and other labor income, but does not include proprietors' income.
4. "Payroll per employee" does not represent full-time, permanent wage or salary levels since employment and payroll figures reflect all part- and full-time, temporary and permanent employment. For this reason, payroll per employee figures will be less than actual wage and salary levels. These figures are presented for industry comparison purposes only.

Source: California Employment Development Department, Labor Market Information Division

IDENTIFYING THE LOCAL ECONOMIC BASE

This section focuses on identifying the *export sector* comprising the local *economic base* in El Dorado County — that part of the local employment base that brings outside dollars into the county. This report considers the export sector from the standpoint of employment characteristics, and defines it as the percentage of employment within each local industry providing goods and services in excess of local demand.

Export-oriented employment in this sense can include producing goods and services for visitors to El Dorado County as well as goods and services "delivered" outside the county. This non-local serving employment comprises the economic base of the local economy. A more thorough explanation of the significance of the local economic base is found in Part I of this report.

LOCATION QUOTIENT ANALYSIS

One technique commonly used in regional economic analysis to assess the local economic base is the *location quotient*. Location quotient analysis indicates which industries have a comparatively larger (or smaller) presence in the local economy. A location quotient equal to 1.0 means that the share of employment in a particular industry in a local economy is exactly the same as the share of employment in the same industry for the nation or state as a whole. If the location quotient is greater than one, the local share of employment in a particular industry exceeds the national or state share of employment in the same industry. If it is less than one, the local share of employment in an industry is less than the national or state share.

Because industries with a location quotient greater than one indicate relatively high production of a particular good or service, it is likely that some amount is being exported. Employment in that industry (or the portion of employment that causes the quotient to exceed 1.0) is then assigned to the economic base and is given credit for supporting the economy as a whole. Conversely, industries with a location quotient

less than one are assumed to be local-serving or non-basic industries. For economic development purposes, it is often useful to focus on the extremes — industries with location quotients greater than 1.25 (likely export base components) and those with location quotients less than 0.75 (potential import substitution opportunities). The assumption is that industries falling between 0.75 and 1.25 are probably producing amounts sufficient to meet local demand.

It is important to be aware of several tenuous assumptions underlying the use of location quotients. These are: 1) that demand or consumption patterns are constant across regions and that income levels are also constant; 2) that labor productivity does not vary from region to region; and 3) that each firm in an industry produces an identical product. For these reasons, some analysts hesitate to ascribe economic base interpretations to location quotients, preferring to interpret them simply as *coefficients of specialization*. The implication is that industries with location quotients greater than 1.0 represent local strengths that merit special attention in economic planning.

What the numbers mean...

❖ What a location quotient can tell us:

The location quotient is an indicator of how well represented an industry is locally compared to the state or nation as a whole. A location quotient is expressed as a ratio. A location quotient greater than 1.0 indicates that a particular industry has a larger share of total local employment than that industry has as a share of total state or national employment. A location quotient near 1.0 (say, between 0.75 and 1.25) indicates that local employment in a particular industry accounts for about the same percentage of total local employment as that industry statewide or nationwide - in a sense, the local employment share of that industry is in "equilibrium" with the state or national employment share. A high location quotient suggests that a local industry employs more workers (thus produces more goods or services) than needed to meet local demand, thus some portion of the local employment in this industry must be devoted to providing goods or services for "export" out of the community. "Export" in this sense can mean physically exporting goods or providing services outside the community or it can mean providing goods and services locally to non-residents, primarily through tourism.

❖ What a location quotient does not say:

A local industry with a location quotient of 27.59 does not mean that this many local jobs will be created for every additional job in that industry. Nor does it imply that a particular local industry is a "stronger performer" locally or "healthier" than a local industry with a location quotient of 5.10 or even 0.76. What it does suggest is that certain local industries are more oriented to serving the export sector of the economy than serving local needs only, or at all - these industries together constitute the *economic base* of the local economy.

THE EL DORADO COUNTY ECONOMIC BASE

Figure II-8a summarizes El Dorado County's economic base according to industry sector.

The reliance of the local employment base on the retail and services sectors is evident. Together these two sectors accounted for 62 percent of *total employment* and 52 percent of *total payroll* in 1993. The government sector is the third largest employer and accounted for another 10 percent of total employment and 14 percent of total payroll. This includes all local, state, and federal employment in the county.

These three sectors also constitute the bulk of

the local economic base as indicated by *export employment*. The services, retail, and government sectors together accounted for 78 percent of the local economic base in 1993.

The construction industry accounted for another 10 percent of export employment.

Looking now at industry *location quotients* in the last column of Figure II-8a, sectors with a high degree of local industry specialization can be identified. As explained earlier, industries with a location quotient much above 1.0 have more employment than necessary to meet local demand and thus represent a local industry specialization relative to the state as a whole. These industries will have the greatest proportion of

employment devoted to providing export goods and services.

Mining has the highest local specialization, though this sector accounts for only a very small portion of the local employment base.

The high government sector location quotient can be attributed to employment associated with managing the extensive federal and state land-holdings and facilities located within the county.

The construction and retail trade sectors also have high local industry specialization.

While the services sector contains a good deal of export-oriented employment in a variety of industries, a location quotient close to 1.0 indicates the size of the service sector overall is no larger than would be expected to meet local demand only.

Specific local industry specializations within each sector are discussed next.

EXPORT SECTOR ANALYSIS

Figure II-8b offers employment, payroll, and export sector information for specific local industries within each sector.

Almost all export-oriented employment within the services sector is concentrated within the lodging and amusement and recreation industries.

Eating and drinking places and food stores account for most of the export employment in the retail trade sector. The local automotive dealer industry also contributes a significant share of the export-oriented employment within this sector.

The lumber and wood products industry constitutes the only significant contribution to the local economic base within the county's scanty manufacturing sector. In actuality, many locally manufactured goods probably are intended for customers outside the county; the scattered local industries within this sector are simply too small relative to the remainder of the local economy to show employment levels above that expected to meet local demand.

The construction sector continues to represent a significant component of the local economic base. Over 600 local construction contractors accounted for close to 900 export-oriented jobs

in 1993. Export employment in this sector primarily reflects housing construction work to meet the demand from a tremendous influx of new residents.

One industry within the transportation and public utilities sector – electric, gas, and sanitary services – accounted for an estimated 300 jobs within the local economic base.

Again, "export" employment within the government sector can be attributed to federal and state government activities within the county primarily tied to resource management and highway maintenance. These activities serve a greater public than only local communities. Federal and state employment represents additional locally captured federal and state tax dollars.

The educational and health services industries provided the largest local payrolls. Other significant local payrolls are generated in the following private-sector industries: food stores; electric, gas, and sanitary services; eating and drinking places; special trade contractors; lumber and wood products; and automotive dealers.

Figure II-8c highlights the largest industries constituting the local economic base, and the industries most reliant on producing goods or services for non-local or tourist markets.

FIGURE II-8a

ECONOMIC BASE SUMMARY

EL DORADO COUNTY, 1993

Industry Sector	Total Employment and Payroll			Export Employment			Location Quotient
	Total Employ.	Share of Total Emp.	Share of Total Payroll	Export Employ.	Share of Employ.	Share of Total Export Employ.	
Agriculture	531	1.7%	1.0%	9	1.7%	0.1%	0.49
Mining	36	0.1%	0.2%	23	63.0%	0.2%	2.71
Construction	2,037	6.6%	8.6%	879	43.2%	9.5%	1.76
Manufacturing	1,719	5.5%	7.4%	639	37.2%	6.9%	0.39
Transportation & Public Utilities	1,508	4.9%	7.3%	371	24.6%	4.0%	0.78
Wholesale Trade	1,049	3.4%	3.9%	0	0.0%	0.0%	0.61
Retail Trade	7,798	25.1%	17.2%	2,666	34.2%	28.8%	1.45
Finance, Insurance, & Real Estate	1,581	5.1%	5.5%	105	6.6%	1.1%	0.78
Services	11,511	37.1%	34.4%	2,879	25.0%	31.1%	1.03
Nonclassifiable	81	0.3%	0.2%	0	0.0%	0.0%	0.76
Government	3,161	10.2%	14.0%	1,675	53.0%	18.1%	2.07
Totals	31,038	100.0%	100.0%	9,245	29.8%	100.0%	1.00

Notes:

1. Export employment and the location quotient are based on a comparison of the local economy with the California economy as a whole.
2. Payroll includes salary, wage, and other labor income, but does not include proprietors's income.
3. Annual figures are averages derived from four quarterly reporting periods.

Source:

Derived from ES202 records provided by the California Employment Development Department, Labor Market Information Division

FIGURE II-8b

EL DORADO COUNTY ECONOMIC BASE PROFILE, 1993

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Industry	Establishments	Employment	Annual Payroll	Location Quotient	Export Employment
AGRICULTURE					
Agriculture production -- crops	72	206	\$1,679,484	0.42	
Agriculture production -- livestock	7	9	\$90,196	0.14	
Agriculture services	72	303	\$4,744,129	0.57	
Forestry	9	13	\$142,250	3.24	9
MINING					
Mining -- nonmetallic minerals	3	36	\$1,265,546	2.71	23
CONSTRUCTION					
General building contractors	299	609	\$17,093,731	2.17	328
Heavy construction contractors	32	427	\$15,299,577	2.39	248
Special trade contractors	285	1,002	\$25,919,791	1.43	303
MANUFACTURING					
Food & kindred products	8	55	\$828,506	0.12	
Apparel & fabric products	3	20	\$216,172	0.06	
Lumber & wood products	51	759	\$25,083,045	6.32	639
Furniture & fixtures	4	40	\$636,790	0.35	
Paper & allied products	3	18	\$345,849	0.17	
Printing & publishing	33	377	\$6,204,226	0.98	
Chemicals & allied products	4	34	\$4,361,181	0.19	
Rubber & misc. plastics	3	13	\$262,981	0.07	
Stone, clay, glass, & concrete	7	85	\$2,190,874	0.74	
Fabricated metal	8	66	\$1,706,943	0.23	
Industrial machinery & equipment	23	69	\$2,009,292	0.14	
Electronic equipment	7	34	\$1,132,745	0.06	
Transportation equipment	4	22	\$547,048	0.04	
Instruments & related products	5	76	\$3,277,303	0.16	
Miscellaneous manufacturing	6	55	\$1,168,132	0.61	
TRANSPORTATION & PUBLIC UTILITIES					
Transit & passenger transportation	6	74	\$1,529,008	0.48	
Trucking & warehousing	38	235	\$5,456,630	0.58	
U.S. Postal Service	17	239	\$7,924,941	1.12	25
Water transportation	7	92	\$1,528,471	1.96	45
Air transportation	6	15	\$268,338	0.06	
Transportation services	18	54	\$718,217	0.41	
Communications	10	142	\$5,036,539	0.38	
Electric, gas, & sanitary services	19	658	\$27,051,182	1.84	301
WHOLESALE TRADE					
Wholesale trade -- durable goods	84	532	\$13,189,039	0.54	
Wholesale trade -- nondurable goods	81	517	\$13,382,837	0.71	

EL DORADO COUNTY ECONOMIC BASE PROFILE, 1993

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Industry	Establishments	Employment	Annual Payroll	Location Quotient	Export Employment
RETAIL TRADE					
Building materials & garden supplies	52	316	\$5,301,046	1.63	122
General merchandise stores	9	415	\$5,680,740	0.63	
Food stores	82	1,711	\$35,314,156	2.25	949
Automotive dealers	81	854	\$20,905,980	1.68	344
Apparel & accessory stores	59	414	\$6,223,527	1.23	77
Furniture & home furnishings	59	273	\$6,034,267	1.03	7
Eating & drinking places	236	3,101	\$26,820,860	1.57	1,130
Miscellaneous retail	165	716	\$9,806,251	1.05	36
FINANCE, INSURANCE, & REAL ESTATE					
Depository institutions	35	396	\$7,595,849	0.63	
Nondepository institutions	19	98	\$3,963,935	0.57	
Securities & commodities	8	8	\$247,166	0.07	
Insurance	29	482	\$12,981,509	1.28	105
Insurance agents, brokers, & services	43	117	\$2,672,303	0.60	
Real estate	133	471	\$9,580,957	0.99	
Holding & investment offices	6	11	\$218,869	0.14	
SERVICES					
Hotels, motels, & other lodging	113	1,480	\$17,867,228	3.28	1,029
Personal services	72	249	\$2,846,716	0.84	
Business services	117	597	\$9,866,088	0.31	
Car repair, services, & garages	98	341	\$6,813,641	1.03	10
Miscellaneous repair services	29	83	\$1,684,158	0.69	
Motion pictures	31	179	\$1,555,326	0.56	
Amusement & recreation services	71	1,157	\$18,076,227	2.24	640
Health services	229	2,383	\$61,706,894	0.98	
Legal services	50	129	\$3,369,282	0.40	
Educational services	35	3,581	\$81,989,061	1.48	1,160
Social services	79	504	\$7,409,440	0.90	
Membership organizations	35	123	\$1,973,169	0.50	
Engineering, management, & related	116	443	\$14,215,984	0.42	
Private households	564	243	\$1,992,611	1.18	37
Miscellaneous services	5	21	\$1,052,285	1.19	3
NONCLASSIFIABLE					
Nonclassifiable establishments	36	81	\$1,576,897	0.76	

EL DORADO COUNTY ECONOMIC BASE PROFILE, 1993

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Industry	Establish- ments	Employ- ment	Annual Payroll	Location Quotient	Export Employment
GOVERNMENT					
Executive, legislative, & general	5	735	\$18,563,958	2.05	376
Justice & public safety	20	906	\$31,531,551	1.75	388
Public finance & taxation	1	96	\$2,955,585	0.87	
Human resources	4	430	\$12,089,923	1.69	175
Environment & housing	19	852	\$24,871,985	7.29	735
Economic development	9	143	\$4,580,186	0.86	
County totals	3,985	31,038	\$674,808,702		9,245

Notes:

1. Export employment does not indicate actual total employment within an industry. Rather, export employment indicates the estimated number of jobs within an industry devoted to producing goods or services in excess of local demand. Total employment is not reported where necessary to maintain employer confidentiality.
2. Annual figures are averages derived from four quarterly reporting periods.
3. Payroll includes salary, wage, and other labor income, but does not include proprietors' income.
4. County total figures include unreported employment and payroll from private industries with less than three establishments. Separate employment and payroll data for these industries are not reported to avoid disclosure.

Source:

Derived from confidential employment data provided by the California Employment Development Dept. (ES 202 records).

FIGURE II-8c**EL DORADO COUNTY EXPORT SECTOR PROFILE, 1993****A. Largest export dependent industries, by location quotient**

Rank	Industry	Location Quotient	Total Employment	Export Employment
1	Lumber and wood products	6.32	759	639
2	Hotels and motels and other lodging	3.28	1,480	1,029
3	Forestry services	3.24	13	9
4	Mining - nonmetallic minerals	2.71	36	23
5	Heavy construction contractors	2.39	427	248
6	Food stores	2.25	1,711	949
7	Amusement and recreation services	2.24	1,157	640
8	General building contractors	2.17	609	328
9	Water transportation	1.96	92	45
10	Electric, gas, and sanitary services	1.84	658	301

B. Largest export sector industries, by export employment size

Rank	Industry	Location Quotient	Total Employment	Export Employment
First tier:				
1	Educational services	1.48	3,581	1,160
2	Eating and drinking places	1.57	3,101	1,130
3	Hotels and motels and other lodging	3.28	1,480	1,029
4	Food stores	2.25	1,711	949
5	Amusement and recreation services	2.24	1,157	640
6	Lumber and wood products	6.32	759	639
7	Automotive dealers	1.68	854	344
8	General building contractors	2.17	609	328
9	Special trade contractors	1.43	1,002	303
10	Electric, gas, and sanitary services	1.84	658	301
11	Heavy construction contractors	2.39	427	248
12	Building materials and garden supplies	1.63	316	122
13	Insurance	1.28	482	105
14	Apparel and accessory stores	1.23	414	77

Note:

Export employment does not indicate actual total employment within an industry. Rather, export

ASSESSING LOCAL INDUSTRY PERFORMANCE

This section provides an assessment of how well local industries have performed in terms of total earnings growth relative to nationwide performance. The analysis identifies local indus-

tries that are aligned with growing or declining national markets, and offers evidence of local over- or under representation within specific industries.

GAUGING LOCAL INDUSTRY PERFORMANCE USING SHIFT-SHARE ANALYSIS

Shift-share analysis is a computational technique that describes the shifts in U.S. employment by industry, and the local or competitive share of employment change by industry. Shift-

share analysis answers two basic questions: first, which industries are growing faster (or more slowly) than the total mix of all national industries, and second, is the local area getting a larger or smaller share of each industry. The matrix below shows the significance of these questions for economic development strategic planning.

Industry Growth Performance Category Matrix

Local share of each industry ^b	National industry growth ^a	
	Growth	Decline
Increasing	CATEGORY I Opportunities for retention and expansion of existing firms	CATEGORY II "Red flags" (potential threats to local economic development)
Decreasing	CATEGORY III Opportunities for attracting and/or starting up new firm if internal development factors are conducive to growth in the particular sector	CATEGORY IV Seek alternative niche opportunities within same or allied industries

a) Growth industries are those which have experienced employment and/or total earnings growth, compared to the total mix of U.S. industries.

b) Increasing local or "competitive" share of an industry means that employment and/or total earnings in an industry is growing locally at a greater rate than it is growing nationally.

(Adapted from Christine M. Reed, B. J. Reed, and Jeffrey S. Luke. 1987. "Assessing readiness for economic development strategic planning." *Journal of the American Planning Association* 53: 521-530).

Each cell of the two-dimensional matrix suggests a different set of strategic issues. For example, a community with an increasing share of an industry that is growing, compared to the total mix of industries nationally, needs to try to retain and possibly expand those local firms (Category I). Conversely, a growing share of a declining industry may be a "red flag" for community leaders (Category II). National trends may have a negative effect on local industries; and, even though an increasing local share normally reflects strengths in the local economy, a present internal strength could become a liability in the face of external changes in the economy. Such is

the case with certain manufacturing industries.

The cell representing a declining share of a slow or no-growth industry implies both external threats and internal weaknesses (Category IV). However, a declining share of a growth industry should signal community leaders to explore the reasons why the local share is declining (Category III). Negative internal factors may affect development and community leaders may have virtually no control over them. On the other hand, the community may be able to take steps to reverse the declining local share of an otherwise healthy industry.

LOCAL INDUSTRY GROWTH PERFORMANCE IN EL DORADO COUNTY

An assessment of the growth performance of local industries in El Dorado County was accomplished using shift-share analysis. Growth performance comparing local and national industry trends was tracked from 1979 to 1992. This period captures decline and growth of local industries through the previous national business cycle (1979-90) up to the most recently available data (1990-92).

Industry performance during the 1979-90 business cycle is indicative of longer-term local industry growth trends shaped by structural changes in the local and regional economies. Industry performance during the recent 1990-92 period should not be taken to reflect local industry growth trends per se, but do suggest those industries most affected by the recent downswing in the national economy.

Industry earnings data were used in the analysis. Earnings were adjusted for inflation over time. The complete shift-share analysis tables are included in the appendix of this report.

Each of the following sections reports findings for each of the *four industry performance categories* identified in the preceding matrix. Please refer to this matrix and discussion in the preceding section "Gauging Local Industry Performance Using Shift-Share Analysis" for a better understanding of the local economic development implications for each of these industry performance categories.

Figure II-9 lists industry groups by industry performance category. Each industry group is classified into a performance category according to earnings performance over the previous 1979-90 national business cycle. Many local industry groups changed industry performance categories during the 1990-92 recessionary period; Figure II-9 gives the percent change in industry earnings during this period.

CATEGORY I INDUSTRIES

Several industries in El Dorado County have experienced robust growth during the previous business cycle (1979-90), increasing their share of total earnings nationwide within each industry even as national growth within each of these industries has also expanded.

Among the 12 industry groups in this category, the most significant in terms of total earnings include special trade contractors and health services which together accounted for over \$200 million in local earnings in 1990 (1992 constant dollars). Business services, amusement and recreation services, and eating and drinking places contributed another \$131 million to local earnings in 1990.

The biggest performers within this category in terms of annualized percentage gains over the 1979-90 business cycle include social services (42%), forestry and fisheries (29%), amusement and recreation services (24%), business services (22%), and special trade contractors (20%).

Significantly, only 4 of the original 12 industry groups that had experienced the strongest long-term local growth trends remained in this

industry performance category by 1992, following the advent of the recent recessionary period beginning in 1990. Even more startling, 4 of the 8 dislodged from this category found themselves in the fourth and last industry performance category in just two years. Including special trade contractors, home furniture and furnishing stores, insurance agents and brokers, and miscellaneous retail, local businesses within these industry groups have suffered from a declining local share of industries that are themselves declining nationally. The largest annualized declines in earnings from 1990-92 were experienced in miscellaneous retail (-10%), home furniture stores (85%), and business services (8%).

Four industry groups in this growth performance category continued to grow both nationally and locally from 1990-92: eating and drinking places, auto repair and services, motion pictures, and social services. Three industry groups which continue to perform well nationally and have increased their share of total local earnings during this period are transportation services, credit institutions, and educational services.

Finally, two emerging local industry groups that performed strongly during 1990-92 are security brokers and insurance carriers.

CATEGORY II INDUSTRIES

During the previous national business cycle, growth within local businesses representing 20 industry groups resulted in an increased local share of total earnings within industries that either grew slower than the U.S. economy as a whole or experienced a net decline in earnings nationwide. The largest industry groups in this category – general building contractors and lumber and wood products – accounted for \$118 million in local earnings in 1990 (constant \$1992), or 11 percent of total local earnings. Food stores, wholesale trade, and automotive

dealers and service stations accounted for another \$90 million in local earnings.

The biggest performers within this category in terms of annualized percentage gains in local earnings over the 1979-90 business cycle include stone, clay and glass products (55%), petroleum and coal products (49%), railroad transportation (37%), non-electrical machinery (33%), general merchandise stores (26%), and forestry and fisheries (20%). Local industries that experienced a net decline in annualized earnings even as their share of nationwide industry earnings increased from 1979-90 include

FIGURE II-9**EL DORADO COUNTY
INDUSTRY GROWTH PERFORMANCE**

Page 1 of 2

Industry	Earnings (\$000)				Percent change	
	1969	1979	1990	1992	1979-90	1990-92
CATEGORY I						
Agriculture services	1,105	2,602	10,868	10,688	317.7%	-1.7%
Special trade contractors	13,556	36,902	116,955	104,187	216.9%	-10.9%
Home furniture & furnishings stores	910	4,463	10,310	8,725	131.0%	-15.4%
Eating and drinking places	14,041	27,162	39,614	41,671	45.8%	5.2%
Miscellaneous retail	11,396	16,491	31,887	25,800	93.4%	-19.1%
Insurance agents, brokers, & services	2,213	3,955	9,677	9,103	144.7%	-5.9%
Business services	3,601	17,846	61,638	51,523	245.4%	-16.4%
Auto repair, services, & garages	4,939	8,728	15,471	18,273	77.2%	18.1%
Amusement & recreation services	1,537	9,200	33,797	38,296	267.3%	13.3%
Motion pictures	1,564	1,258	2,496	2,604	98.3%	4.3%
Health services	17,952	41,861	86,202	95,932	105.9%	11.3%
Social services	n/a	1,152	6,459	7,505	460.4%	16.2%
Category I totals	\$72,815	\$171,621	\$425,372	\$414,307	147.9%	-2.6%
CATEGORY II						
Forestry, fisheries, and other	398	445	1,439	719	223.3%	-50.1%
Mining	3,227	3,159	2,182	1,422	-30.9%	-34.8%
General building contractors	7,592	32,151	71,847	60,655	123.5%	-15.6%
Printing and publishing	3,089	6,040	9,215	10,142	52.6%	10.1%
Petroleum and coal products	409	187	1,204	156	544.3%	-87.0%
Lumber and wood products	25,197	33,761	46,082	43,088	36.5%	-6.5%
Machinery, except electrical	875	2,000	9,350	5,234	367.4%	-44.0%
Stone, clay, and glass products	2,118	807	5,699	4,010	605.8%	-29.6%
Railroad transportation	554	141	718	868	410.5%	20.9%
Trucking and warehousing	5,681	9,152	10,518	8,950	14.9%	-14.9%
Wholesale trade	8,972	14,080	29,245	36,525	107.7%	24.9%
Building materials & gardening stores	4,568	8,507	9,309	10,026	9.4%	7.7%
General merchandise stores	1,988	2,031	7,815	6,821	284.7%	-12.7%
Food stores	9,198	25,329	33,040	41,568	30.4%	25.8%
Automotive dealers & service stations	14,026	21,020	27,315	29,967	29.9%	9.7%
Apparel and accessory stores	1,999	4,196	8,152	12,140	94.3%	48.9%
Personal services	6,583	7,890	15,452	14,307	95.8%	-7.4%
Private households	2,523	2,904	4,447	4,496	53.1%	1.1%
Membership organizations	7,317	8,690	12,194	10,805	40.3%	-11.4%
Miscellaneous services	4,710	12,442	3,958	4,512	-68.2%	14.0%
Category II totals	\$111,024	\$194,932	\$309,182	\$306,411	58.6%	-0.9%

**EL DORADO COUNTY
INDUSTRY GROWTH PERFORMANCE**

Page 2 of 2

Industry	Earnings (\$000)				Percent change	
	1969	1979	1990	1992	1979-90	1990-92
CATEGORY III						
Transportation by air	356	2,195	372	147	-83.0%	-60.5%
Transportation services	n/a	1,135	1,298	1,485	14.3%	14.4%
Credit institutions	7,263	14,279	10,817	11,639	-24.2%	7.6%
Hotels and other lodging places	19,038	28,060	28,282	31,797	0.8%	12.4%
Legal services	1,694	5,080	9,067	9,198	78.5%	1.4%
Educational services	428	2,467	1,216	2,877	-50.7%	136.6%
Category III totals	\$28,779	\$53,216	\$51,053	\$57,143	-4.1%	11.9%
CATEGORY IV						
Farm	7,864	8,713	3,219	3,708	-63.1%	15.2%
Heavy construction contractors	18,216	15,331	8,934	11,545	-41.7%	29.2%
Furniture and fixtures	n/a	310	n/a	1,586	n/a	n/a
Fabricated metal products	367	782	n/a	2,392	n/a	n/a
Real estate	12,543	15,084	1,014	1,002	-93.3%	-1.2%
Miscellaneous repair services	2,493	3,916	4,608	4,590	17.7%	-0.4%
Category IV totals	\$41,482	\$44,137	\$17,776	\$24,823	-59.7%	39.6%
EARNINGS COMPARISON						
Category I % of total county earnings	21.3%	27.6%	38.7%	36.7%		
Category II % of total county earnings	32.5%	31.3%	28.2%	27.1%		
Category III % of total county earnings	8.4%	8.5%	4.6%	5.1%		
Category IV % of total county earnings	12.2%	7.1%	1.6%	2.2%		
Percent of total county earnings	74.4%	74.5%	73.2%	71.1%		

Notes:

1. Industry growth performance categories based on shift-share analysis for the previous 1979-90 national business cycle.
2. Industries shown are "major industry groups" at the 2-digit SIC level.
3. Industry performance category earnings do not add to total county earnings — government sector employment and some smaller industries are not reported.
4. Earnings based on constant 1992 dollars using the U.S. consumer price index (CPI-U).

Source:

Data series from U.S. Dept. of Commerce, Bureau of Economic Analysis, Regional Economic Information System.

miscellaneous services (-6%) and mining (-3%).

Emerging industry groups within this category include apparel and other textile products, instruments and related products, miscellaneous manufacturing, and holding and other investment companies.

Category II industries accounted for 34 percent of local private-sector earnings in 1990 and 1992.

Nine of the 20 local industry groups in this category slipped into a situation of declining local industry shares within industries declining nationwide during the recent recessionary period. These include general building contractors and lumber and wood products, the two largest earning industries within this category. The local

general building contractors industry declined in earnings by 16 percent from 1990-92, while the local lumber and wood products industry declined by 6 percent. Local growth within two industry groups in this category – petroleum and coal products and forestry and fisheries – did not keep pace with nationwide growth within these industries from 1990-92, with the local petroleum and coal products industry also experiencing a net decline in earnings during this period.

Local industry groups within this category experiencing the most significant annualized declines in earnings from 1990-92 include petroleum and coal products (-44%), forestry and fisheries (-25%), non-electrical machinery (-22%), mining (-17%), and stone, clay and glass products (-15%).

CATEGORY III INDUSTRIES

Category III includes local industry groups that have declined in their share of growing national industries over the 1979-90 business cycle. This category holds the most promise for business expansion and recruitment due to the presumed gap in filling the local share of increased national demand within each of these industry groups. In fact, four of the six local industry groups in this category did grow significantly in the ensuing period, increasing their share of national earnings from 1990-92. The biggest gain was in educational services, which experienced a 68 percent annualized increase in local earnings.

This category is the smallest growth performance category for the 1979-90 period, accounting for 5.7 percent of local private-sector earnings in 1990 and 6.3 percent in 1992.

The largest local industry groups in this category is hotels and other lodging places, which accounted for about \$28 million in local earnings in 1990. Other industry groups in this category include credit institutions, legal services, educational services, transportation by air, and transportation services.

Emerging local industry groups within this category include food products and electric, gas, and sanitary services.

CATEGORY IV INDUSTRIES

Category IV industries have demonstrated the most lackluster performance both locally and nationally over the previous business cycle.

Industries in this category are characterized by long-term decline based on structural changes in the local, national, and global economies.

Earnings within this category is small, representing less than 2 percent of total local earnings

in 1990. The largest industry group is heavy construction contractors, which accounted for about \$9 million in local earnings in 1990.

Based on the recent significant increase in membership in this category, the recent recessionary period has taken its toll on several local industry groups. The 1990-92 shift-share analysis added 14 local industry groups from other categories. This slide of several local industry

groups into "last place" does not necessarily represent a trend of declining local industry earnings. Rather, it reflects the impact of the recent national recessionary period on the local economy.

Nonetheless, this struggling category of local industries accounted for \$310 million or 34 percent of total local earnings in 1992.

CONSIDERATIONS FOR LOCAL ECONOMIC RESILIENCE

Shift-share analysis suggests certain trends in the local economy. Most of the local industries that have demonstrated the best long-term performance (Category I) are within the services sector. Exceptions to this, primarily in the retail and construction sectors, included industries that have been hard hit during the recent recessionary period.

Those industries placed in the most disadvantageous position for long-term sustainability (Category IV) are found within the manufacturing and construction sectors. Many other local industries within these two sectors performed quite well during the 1979-90 business cycle, yet were also particularly hard hit during the 1990-92 period. Though relatively few industries were in this position throughout the previous 11-year

national business cycle, this category grew by eleven industries during the 1990-92 recessionary period.

Category II and IV industries together accounted for almost 30 percent of total local earnings. Industries within these categories share a position within declining national markets. However, this percentage is a considerable improvement from the historic local industry mix. In 1969, 45 percent of the local economy was tied to declining national industries. It is also important to remember that many of these industries (Category II) continue to do quite well locally and have simply captured a greater share of waning national markets.

Finally, Category III industries continue to represent potential growth areas in the local economy.



PART III:

**El Dorado County
Economic Subregions**

ASSESSING THE ECONOMIC BASE OF LOCAL COMMUNITIES



For the first time, analysis of employment data by zip code permits a closer look at the variety of local economies found within El Dorado County. Communities were grouped into local economic clusters representing the four economic subregions identified in Part II of this report: valley, foothills, High Sierra, and Tahoe Basin (Figure III-1). Part III presents the results of a location quotient analysis profiling the economic base or export sector of these local economies.³

Location quotient and export employment for the largest export sector industries are given. Together these industries represent the key activities supporting the local economic base. The export employment within each industry is not the total local employment within an industry, but rather an estimate of the number of jobs within an industry devoted to exporting local goods and services outside the community.

Local industries with the highest location quotients are also presented. These industries are most reliant upon exporting their goods and

services beyond the community, and serve more non-resident than resident customers.

Full industry tables presenting the location quotient and estimated export employment for every industry, as well as summary statistics on total employment and export employment for each major industry group of the economy, can be found in the appendix of this report. The location quotient analysis in this report uses the California economy as the comparative base. These tables should be consulted to provide a picture of each local economy overall, including the basic (export) and nonbasic (local serving) sectors of the economy.

³ The disaggregation of local employment by zip code presents a unique set of considerations as to data accuracy; these are discussed in the appendix along with the *complete location quotient tables* for El Dorado County.

ECONOMIC SUBREGIONS IN EL DORADO COUNTY

For the purposes of economic base analysis, four types of subregional economies can be identified within El Dorado County: *valley*, *foothills*, *High Sierra*, and *Tahoe Basin*. Each of these subregions is characterized by a distinct economic base underlying the communities found within each subregion. As their descriptions suggest, these subregions roughly follow the reach of the Sierra Nevada as north to south bands occurring at different elevations. The four counties of the SEDD region straddle these subregional economies from east to west across

the Sierra Nevada divide. The following factors have been considered in identifying each of these unique subregional economies:

■ **Economic structure:** Valley communities are represented by a well diversified local economy with a wide range in scale of establishment size; foothill economies are less diversified and primarily represented by small and medium sized businesses; High Sierra communities retain a degree of natural resource dependency for their economic base, are often characterized by a "monoculture" economy with a single large employment base such as lumber or recreation, and are often found adjacent to or surrounded by

national forest and other public lands; and the Tahoe Basin economy is centered on tourism and recreation and characterized by an oversized services sector catering to tourists and local residents alike.

■ **Infrastructure:** Valley communities are well served by infrastructure improvements with sufficient capacity to accommodate larger developments and industries with significant infrastructure requirements, and are located along major transportation corridors including Interstate 80 and the "lower" multi-lane section of Highway 50; foothill communities are situated along the Highway 49 corridor, with limited infrastructure in place much beyond their immediate areas of influence; High Sierra communities often lack adequate community facilities, many residents and businesses relying on private water and septic systems, have no postal address delivery, and face significant seasonal mobility challenges from inclement weather; while the infrastructure serving Tahoe Basin communities is overtaxed by the influx of visitors to the area in the context of significant impacts to the fragile ecosystem in the basin.

■ **Topography:** Valley communities share the same buildable land characteristics found in the Central Valley, with ample area for large footprint development; foothill communities are more constrained by topography, with clustered

development competing with agriculture for limited level and arable land; High Sierra communities are limited to pockets of buildable land largely surrounded by public lands and facing severe seasonal weather conditions; and the Tahoe Basin is here defined to include communities located east of the Sierra Nevada divide (not including Sierra Valley).

The following communities within El Dorado County have been clustered into four economic subregions according to the above criteria:

1. Valley: El Dorado Hills

2. Foothills: Placerville, Cameron Park, Latrobe, Coloma, Diamond Springs, Cool, Lotus, Pilot Hill, Shingle Springs, and Rescue.

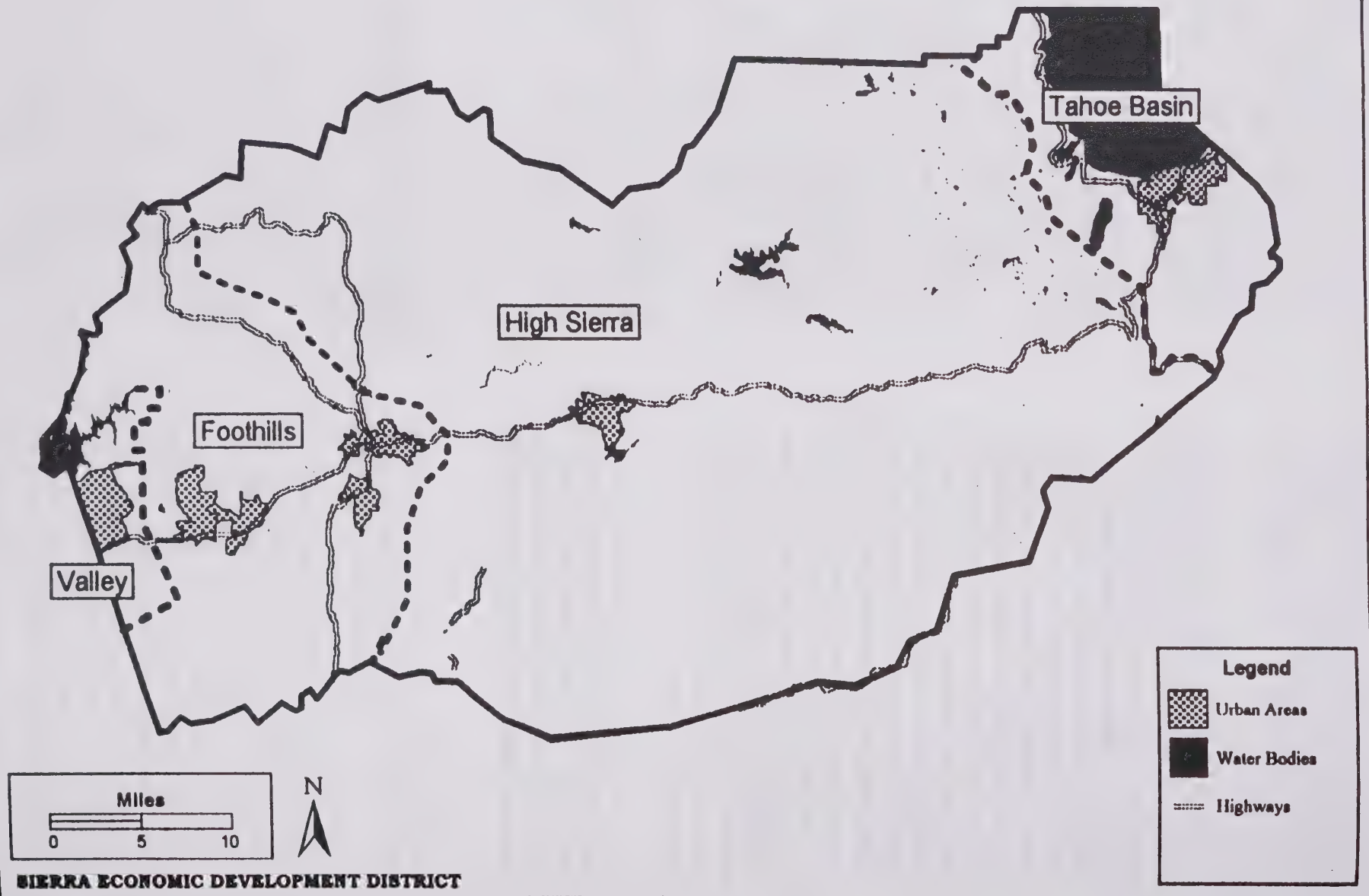
3. High Sierra: Georgetown, Camino, Garden Valley, Greenwood, Kelsey, American Flat, Meadow Brook, Pollack Pines, Pacific House, Somerset, Grizzly Flat, Cedar Grove, Strawberry, Fred's Place, Twin Bridges, Kyburz, Silver Fork, Mt. Aukum, and Echo Summit.

4. Tahoe Basin: South Lake Tahoe, Tahoe Paradise, Meyers, and Meeks Bay.



FIGURE III-1

El Dorado County Economic Subregions



SUMMARY OF ECONOMIC SUBREGIONS

Figure III-2a summarizes total employment and export employment within each economic subregion in El Dorado County. Export jobs indicate the estimated number of jobs devoted to producing goods and services in excess of local demand. In this case, local demand means demand by residents and other businesses within a particular subregion. Since these economic subregions each represent a subset of the county's total population, the percentage of local jobs attributed to the export sector will include jobs providing goods and services to *other residents in the county* as well as to tourists and customers located outside the county. As a result, the industry estimates of local jobs identified with the export base of each economic subregion will be higher than the estimates for the county as whole presented in Part II of this report.

Anchored by Placerville, the Foothill subregion accounts for just over 60 percent of the county's employment base. The Tahoe Basin subregion accounts for another 30 percent. The lumber industry accounts for the higher proportion of the share of export jobs to total jobs in the High Sierra subregion. Activity in the El Dorado Hills Industrial Park accounts for a higher proportion of export-based jobs in the Valley subregion.

Figure III-2b compares the share of total and export jobs within the county by industry sector for each economic subregion. As the largest economic subregion, the Foothill subregion ac-

counts for the lion's share of employment within every industry sector.

The Tahoe Basin subregion accounts for close to half the employment within the transportation and public utilities sector in the county, and more than half of the export-based jobs in that sector. The Tahoe Basin accounts for 38 percent of total retail employment in the county, and 45 percent of the county's retail export sector employment. The construction, manufacturing, and finance sectors are significantly underrepresented in the Tahoe Basin.

The High Sierra economic subregion accounts for the second highest share of county employment within the manufacturing and agriculture, forestry, and fisheries sectors. The services sector is significantly underrepresented in the High Sierra.

The Valley subregion is the smallest of the four economic subregions in El Dorado County. The construction sector is the only industry sector with a significant share of county employment, accounting for 11 percent of total jobs in the county within in that sector and 17 percent of its export-based employment. The wholesale trade and services sectors are both significantly underrepresented within this economic subregion.



FIGURE III-2a

**SUMMARY OF THE EMPLOYMENT AND EXPORT BASE
EL DORADO COUNTY ECONOMIC SUBREGIONS, JUNE 1993**

Economic Subregion	Within Subregion			Within County	
	Jobs	Export Jobs	% Export Jobs	Share of Total Jobs	Share of Export Jobs
Tahoe Basin	8,117	4,913	60.5%	29.0%	28.9%
High Sierra	1,484	1,093	73.7%	5.3%	6.4%
Foothill	17,098	10,019	58.6%	61.1%	59.0%
Valley	1,284	960	74.8%	4.6%	5.7%

Note: Export employment does not indicate actual total employment within an industry. Rather, export employment indicates the estimated number of jobs within an industry devoted to producing goods or services in excess of local demand.

Source: Derived from confidential employment data provided by the California Employment Development Department (ES 202 records).

FIGURE III-2b

COMPARISON OF EMPLOYMENT BASE BY INDUSTRY SECTORS EL DORADO COUNTY ECONOMIC SUBREGIONS, JUNE 1993

Industry Sector	El Dorado County		Tahoe Basin		High Sierra		Foothills		Valley	
	Total Jobs	Export Jobs	Share of Total Jobs	Share of Export Jobs	Share of Total Jobs	Share of Export Jobs	Share of Total Jobs	Share of Export Jobs	Share of Total Jobs	Share of Export Jobs
Agriculture, forestry, fishing	487	248	10.5%	10.5%	31.2%	52.0%	58.3%	37.5%	n/a	n/a
Mining	32	37	0.0%	0.0%	n/a	16.2%	100.0%	83.8%	0.0%	n/a
Construction	1,985	1,179	17.2%	13.2%	6.1%	7.7%	65.2%	61.8%	11.4%	17.2%
Manufacturing	1,687	1,229	10.5%	9.4%	23.4%	31.2%	60.6%	52.8%	5.5%	6.7%
Transportation and public utilities	1,075	671	45.9%	55.0%	3.2%	3.6%	51.0%	41.4%	n/a	n/a
Wholesale trade	963	452	24.6%	26.5%	3.6%	5.1%	68.8%	63.9%	2.9%	4.4%
Retail Trade	7,646	3,855	38.2%	45.2%	6.0%	7.9%	49.8%	38.4%	6.0%	8.5%
Finance, insurance, real estate	1,436	595	18.6%	11.1%	4.4%	7.1%	71.6%	73.8%	5.4%	8.1%
Services	10,262	7,192	32.0%	31.0%	1.9%	1.2%	63.4%	65.2%	2.7%	2.6%
Government	2,300	1,508	13.7%	5.4%	0.0%	0.0%	82.0%	89.1%	4.2%	5.5%
Totals	27,873	16,966	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes:

1. Export employment does not indicate actual total employment within an industry. Rather, export employment indicates the estimated number of jobs within an industry devoted to producing goods or services in excess of local demand.
2. n/a = not applicable
3. (D) = data not disclosed to ensure employer confidentiality
4. Employment counts on this table will differ slightly from employment counts in the subregional tables included in the appendix due to disclosure restrictions.

Source:

Derived from confidential employment data provided by the California Employment Department (ES 202 records).

TAHOE BASIN ECONOMIC BASE

The tourism-based Tahoe Basin economy in El Dorado County is largely centered in the City of South Lake Tahoe, the only incorporated city in the county other than Placerville, the County seat.

The local economy is dominated by the services and retail sectors, which accounted for over three-fourths of total local jobs and 80.9 percent of local export-oriented jobs. The transportation and public services sector is the only other significant component of the local economic base, accounting for 6.1 percent of total jobs and 7.5 percent of export-oriented jobs.

Among the largest employing industries that are closely tied and reliant upon "exporting" goods and services are hotels and motels, junior colleges, miscellaneous amusement and recreation services, sewerage systems, and water passenger transportation.

Other industries with significant employment that also constitute the local export base to a lesser degree include eating places, grocery stores, hospitals, government, and newspaper publishing or printing. The Tahoe Basin accounts for roughly 30 percent of the county's employment base.

❖

TABLE III-2a**TAHOE BASIN ECONOMIC BASE SUMMARY:
EL DORADO COUNTY, JUNE 1993**

Sector	Within Sector			Within Subregion	
	Jobs	Export Jobs	% Export Jobs	Share of Total Jobs	Share of Export Jobs
Agriculture, forestry, fishing	51	26	51.0%	0.6%	0.5%
Mining	0	0	n/a	n/a	n/a
Construction	342	156	45.6%	4.2%	3.2%
Manufacturing	177	115	65.0%	2.2%	2.3%
Transportation	493	369	74.8%	6.1%	7.5%
Wholesale trade	237	120	50.6%	2.9%	2.4%
Retail Trade	2,917	1,744	59.8%	36.1%	35.5%
Finance, insurance, real estate	267	66	24.7%	3.3%	1.3%
Services	3,285	2,231	67.9%	40.6%	45.4%
Government	316	82	25.9%	3.9%	1.7%
Totals	8,085	4,909	60.7%	100.0%	100.0%

Notes:

1. Export employment does not indicate actual total employment within an industry. Rather, export employment indicates the estimated number of jobs within an industry devoted to producing goods or services in excess of local demand. Total employment is not reported where necessary to maintain employer confidentiality.
2. n/a = not applicable
3. (D) = data not disclosed to ensure employer confidentiality
4. Percentages may not add to 100% due to non-disclosure within certain sectors.

Source:

Derived from confidential employment data provided by the California Employment Department (ES 202 records).

TABLE III-2b

**TAHOE BASIN EXPORT SECTOR:
EL DORADO COUNTY, JUNE 1993**

A. Largest export dependent industries, by location quotient

Rank	SIC Code	Industry	Location Quotient	Export Employment
1	4952	Sewerage systems	1,601.88	102
2	8222	Junior colleges & technical institutes	366.70	273
3	4489	Water passenger transportation	177.30	96
4	7033	Trailer parks & camp sites	16.10	23
5	4111	Local/suburban passenger transit	15.72	29
6	5136	Men's & boy's clothing	15.26	64
7	4493	Marinas	12.01	14
8	7999	Miscellaneous amusement & recreation services	11.46	245
9	7011	Hotels & motels	10.62	1,079

B. Largest export sector industries, by export employment size

Rank	SIC Code	Industry	Location Quotient	Export Employment
First tier:				
1	7011	Hotels & motels	10.62	1,079
2	5812	Eating places	2.85	922
3	5411	Grocery stores	3.30	384
4	8222	Junior colleges & technical institutes	366.70	273
5	7999	Miscellaneous amusement & recreation services	11.46	245
6	8062	General medical & surgical hospitals	1.93	175
7	4952	Sewerage systems	1,601.88	102
8	4489	Water passenger transportation	177.30	96
9	2711	Newspaper publishing or printing	3.53	80
Second tier:				
10	8351	Child day care services	3.69	68
11	5136	Men's & boy's clothing	15.26	64
12	1521	General building contractors: single-family houses	2.40	64
13	7997	Membership sports & recreation clubs	3.88	57
14	8021	Dentists offices	2.10	57
15	4953	Refuse systems	5.20	53

Note:

Export employment does not indicate actual total employment within an industry. Rather, export employment indicates the estimated number of jobs within an industry devoted to producing goods or services in excess of local demand. Total employment is not reported where necessary to maintain employer confidentiality.

Source: Derived from confidential employment data provided by the California Employment Department (ES 202 records).

HIGH SIERRA ECONOMIC BASE

The High Sierra economy in El Dorado County is characterized by local-serving retail businesses and the singular dominance of the Camino sawmill and ancillary logging and mill activities. This subregion is jointly represented by the communities of Camino and Georgetown. These communities and others within the High Sierra are transitioning from resource extractive economies to bedroom communities serving the retail and health, educational, recreational, and social service needs of an increasing percentage of out-commuting residents.

Two sectors — agriculture, forestry and fishing services and manufacturing, primarily lumber manufacture — account for a disproportionate share of local employment, 36.8 percent compared to 7.7 percent for the foothills economy. Together these two sectors constitute almost 50 percent of the local economic base in terms of export-oriented employment. Retail trade accounts for another 31 percent of High Sierra employment and 28 percent of the local economic base.

The services sector is significantly underrepresented within the High Sierra economy, accounting for just 13 percent of total local employment compared to 38 percent in the foothills and 41 percent in the Tahoe Basin. This is reflected in a lack of locally available personal, professional, and business services. Local residents rely on the foothills communities close by to provide these services.

Local industries with significant employment reliant upon export activity include sawmills and planing mills, logging camps and contractors, single-family house contractors, farm management services, veterinary services, and irrigation systems.

Other industries with significant employment that also constitute the local export base to a lesser degree include eating places, grocery stores, and savings institutions. The High Sierra accounts for about 6 percent of the county's employment base.



TABLE III-3a

**HIGH SIERRA ECONOMIC BASE SUMMARY:
EL DORADO COUNTY, JUNE 1993**

Sector	Within Sector			Within Subregion	
	Jobs	Export Jobs	% Export Jobs	Share of Total Jobs	Share of Export Jobs
Agriculture, forestry, fishing	152	129	84.9%	10.5%	11.8%
Mining	(D)	6	n/a	n/a	n/a
Construction	122	91	74.6%	8.4%	8.3%
Manufacturing	395	383	97.0%	27.2%	35.1%
Transportation	34	24	70.6%	2.3%	2.2%
Wholesale trade	35	23	65.7%	2.4%	2.1%
Retail Trade	460	306	66.5%	31.7%	28.0%
Finance, insurance, real estate	63	42	66.7%	4.3%	3.8%
Services	192	87	45.3%	13.2%	8.0%
Government	0	0	n/a	n/a	n/a
Totals	1,453	1,091	75.1%	100.0%	100.0%

Notes:

1. Export employment does not indicate actual total employment within an industry. Rather, export employment indicates the estimated number of jobs within an industry devoted to producing goods or services in excess of local demand. Total employment is not reported where necessary to maintain employer confidentiality.
2. n/a = not applicable
3. (D) = data not disclosed to ensure employer confidentiality
4. Percentages may not add to 100% due to non-disclosure within certain sectors.

Source:

Derived from confidential employment data provided by the California Employment Department (ES 202 records).

TABLE III-3b**HIGH SIERRA EXPORT SECTOR:
EL DORADO COUNTY, JUNE 1993****A. Largest export dependent industries, by location quotient**

Rank	SIC Code	Industry	Location Quotient	Export Employment
1	4971	Irrigation systems	408.48	23
2	2421	Sawmills & planing mills	205.81	287
3	2411	Logging camps & contractors	131.16	75
4	0762	Farm management services	28.29	34
5	0783	Ornamental shrub & tree services	24.76	13
6	0173	Tree nuts	19.09	13
7	7353	Heavy construction equip. renting & leasing	16.57	13
8	0742	Veterinary services for animal specialties	14.41	27
9	1521	General contractors: Single-family houses	10.60	81
10	5251	Hardware stores	10.54	14

B. Largest export sector industries, by export employment size

Rank	SIC Code	Industry	Location Quotient	Export Employment
First tier:				
1	2421	Sawmills & planing mills	205.81	287
2	5812	Eating places	2.67	152
3	1521	General contractors: Single-family houses	10.60	81
4	2411	Logging camps & contractors	131.16	75
5	5411	Grocery stores	3.47	75
6	0762	Farm management services	28.29	34
7	0742	Veterinary services for animal specialties	14.41	27
8	4971	Irrigation systems	408.48	23
9	6036	Savings institutions, not federal	6.39	21
Second tier:				
10	5013	Automotive parts & supplies	6.12	17
11	6531	Real estate agents & managers	2.35	17
12	5541	Gasoline service stations	3.51	16
13	0175	Deciduous tree fruit farms	6.89	15
14	5251	Hardware stores	10.54	14
15	7997	Membership sports & recreation clubs	4.97	14
16	5211	Lumber & building materials dealers	3.17	13
17	7353	Heavy construction equip. renting & leasing	16.57	13
18	0173	Tree nuts	19.09	13
19	0783	Ornamental shrub & tree services	24.76	13
20	5813	Drinking places	4.85	12
21	0172	Grape farms & vineyards	3.35	11
22	2033	Canned fruits, vegetables, preserves, & jams	5.59	11

Note: Export employment does not indicate actual total employment within an industry. Rather, export employment indicates the estimated number of jobs within an industry devoted to producing goods or services in excess of local demand. Total employment is not reported where necessary to maintain employer confidentiality.

Source: Derived from confidential employment data provided by the California Employment Department (ES 202 records).

FOOTHILLS ECONOMIC BASE

The City of Placerville is the center of the foothills economy within El Dorado County. The foothills subregion is characterized by socioeconomically diverse communities located along the Highway 49 corridor and the lower foothills to the west.

The services and retail sectors account for 60 percent of local employment, or 62 percent of the local economic base. Government is the other significant employment sector, accounting for 11 percent of local employment. Other major employment sectors include construction (8 %), manufacturing (6 %), and finance, insurance and real estate (6 %).

Elementary and secondary schools constitute by far the largest employing industry in the county, accounting for roughly 3,800 full- and part-time jobs in June 1992. This sector is not considered part of the economic base, per say, and is not included in the analysis of the local export sector. This is because the primary and secondary educational services provided to local residents are not being "exported" as they might, for example, by a local college that attracts students from outside the county. However, the very high location quotient (67.02) for this sector suggests a large local school-age population

relative to the size of the local economy, yet another indicator of a sizable out-commuting work force residing in the El Dorado County foothills.

Major export-oriented industries include millwork and lumber and wood products, hospital and medical service plans, highway and street general contracting, water supply services, intermediate health care facilities, and cleaning chemicals.

Other industries with significant employment that also participate in the export sector to a lesser degree include grocery stores, car dealers, amusement and recreation services, liquor stores, title insurance, and newspaper publishing and printing.

State and federal resource management and fire protection programs are export-oriented divisions of government with a significant number of local employees serving the greater county and Sierra Nevada region.

The foothills subregion accounts for about 60 percent of the county's employment base.



TABLE III-4a**FOOTHILLS ECONOMIC BASE SUMMARY:
EL DORADO COUNTY, JUNE 1993**

Sector	Within Sector			Within Subregion	
	Jobs	Export Jobs	% Export Jobs	Share of Total Jobs	Share of Export Jobs
Agriculture, forestry, fishing	284	93	32.7%	1.7%	0.9%
Mining	32	31	96.9%	0.2%	0.3%
Construction	1,294	729	56.3%	7.6%	7.3%
Manufacturing	1,022	649	63.5%	6.0%	6.5%
Transportation	548	278	50.7%	3.2%	2.8%
Wholesale trade	663	289	43.6%	3.9%	2.9%
Retail Trade	3,807	1,479	38.8%	22.3%	14.8%
Finance, insurance, real estate	1,028	439	42.7%	6.0%	4.4%
Services	6,506	4,688	72.1%	38.1%	46.8%
Government	1,887	1,343	71.2%	11.1%	13.4%
Totals	17,071	10,018	58.7%	100.0%	100.0%

Notes:

1. Export employment does not indicate actual total employment within an industry. Rather, export employment indicates the estimated number of jobs within an industry devoted to producing goods or services in excess of local demand. Total employment is not reported where necessary to maintain employer confidentiality.
2. n/a = not applicable
3. (D) = data not disclosed to ensure employer confidentiality
4. Percentages may not add to 100% due to non-disclosure within certain sectors.

Source:

Derived from confidential employment data provided by the California Employment Department (ES 202 records).

TABLE III-4b

**FOOTHILL EXPORT SECTOR:
EL DORADO COUNTY, JUNE 1993**

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A. Largest export dependent industries, by location quotient

Rank	SIC Code	Industry	Location Quotient	Export Employment
1	2429	Lumber & wood: Special products sawmills	115.13	26
2	2441	Lumber & wood: Wood boxes & shook	81.77	138
3	1422	Crushed & broken limestone quarrying	81.18	21
4	8231	Libraries & information centers	38.02	31
5	4941	Water supply services	36.98	175
6	8052	Intermediate health care facilities	36.03	135
7	1429	Other crushed & broken stone quarrying	21.15	10
8	5599	Other automotive dealers	19.53	26
9	5984	Liquefied petroleum gas dealers	15.83	49
10	9224	Government: Local & state fire protection	14.85	195
11	7833	Drive-in motion picture theaters	14.20	26
12	7335	Business services: Commercial photography	13.18	30
13	1611	General contracting: highway & street	11.96	252
14	3366	Other copper foundries	11.73	16
15	2411	Lumber & wood: Logging camps & contractors	11.23	68
16	2842	Cleaning, polishing, & sanitation chemicals	10.88	64
17	2431	Lumber & wood: Millwork	10.33	95

B. Largest export sector industries, by export employment size

Rank	SIC Code	Industry	Location Quotient	Export Employment
First tier:				
1	5411	Grocery stores	2.13	398
2	1611	General contracting: highway & street	11.96	252
3	6324	Hospital & medical service plans	7.70	231
4	4941	Water supply services	36.98	175
5	2441	Lumber & wood: Wood boxes & shook	81.77	138
6	5511	Motor vehicle dealers (new & used)	2.07	137
7	8052	Intermediate health care facilities	36.03	135
8	7999	Other amusement & recreation services	3.69	133
9	5921	Liquor stores	7.82	124
10	6361	Title insurance	5.03	99

Second tier continued on next page...

FOOTHILL EXPORT SECTOR: EL DORADO COUNTY, JUNE 1992

Page 2 of 2

B. Largest export sector industries (continued)

Rank	SIC Code	Industry	Location Quotient	Export Employment
Second tier:				
12	2431	Lumber & wood: Millwork	10.33	95
13	2711	Newspaper publishing & printing	2.39	93
14	5199	Other wholesale nondurable goods	2.96	75
15	5541	Gasoline service stations	1.97	73
16	5031	Wholesale lumber, plywood, & millwork	5.89	71
17	2411	Lumber & wood: Logging camps & contractors	11.23	68
18	1791	Special trade contractors: Structural steel erection	7.93	67
19	2842	Cleaning, polishing, & sanitation chemicals	10.88	64
20	8351	Child day care services	2.18	63
21	7532	Automotive upholstery & paint shops	2.80	56
22	7997	Membership sports & recreation clubs	2.35	56
23	1771	Special trade contractors: Concrete work	2.61	55
24	1542	General contractors: Nonresidential buildings	2.51	55
25	0742	Veterinary services for animal specialties	3.23	52
26	7231	Beauty shops	2.10	52

Note: Export employment does not indicate actual total employment within an industry. Rather, export employment indicates the estimated number of jobs within an industry devoted to producing goods or services in excess of local demand. Total employment is not reported where necessary to maintain employer confidentiality.

VALLEY ECONOMIC BASE

The community of El Dorado Hills is designated a "valley" economy for the purposes of this analysis due to a number of factors, including proximity to the Sacramento metropolitan area of influence, the availability of large tracts of relatively unconstrained, developable land (the community's namesake notwithstanding), and the existence of large-capacity infrastructure in the El Dorado Hills Business Park suitable for large-lot development, some of which has already occurred.

Retail and services accounted for 58 percent of local employment in 1992, while the construction sector accounted for an additional 18 percent. The employment in the construction sector reported here is probably somewhat higher than average due to the extent of ongoing construction at the business park during the spring of 1992 when the employment data was analyzed. Manufacturing, government, and finance, insurance and real estate are other significant local employment categories.

The valley subregion is the most export-oriented subregion in the county, with 75 percent of local jobs associated with producing goods and services for customers outside the community. This is not surprising considering that this analysis accounts only for employment within a single small community dominated by a regional-serving business park. The valley subregion accounts for about 5 percent of the county's employment base.

The larger local export-oriented industries include single-family housing and heavy construction contractors, information retrieval services, recreation and utility trailer dealers, and heating equipment fabrication. Other large industries with a lesser degree of export-oriented employment include grocery stores, eating places, child day care services, and gasoline service stations. Finally, local and state government, including fire protection services, employs a number of "export" workers serving the larger county community.



TABLE III-5a**VALLEY ECONOMIC BASE SUMMARY:
EL DORADO COUNTY, JUNE 1993**

Sector	Within Sector			Within Subregion	
	Jobs	Export Jobs	% Export Jobs	Share of Total Jobs	Share of Export Jobs
Agriculture, forestry, fishing	(D)	(D)	(D)	(D)	(D)
Mining	0	n/a	n/a	n/a	n/a
Construction	227	203	89.4%	18.0%	21.4%
Manufacturing	93	82	88.2%	7.4%	8.6%
Transportation	(D)	(D)	(D)	(D)	(D)
Wholesale trade	28	20	71.4%	2.2%	2.1%
Retail Trade	462	326	70.6%	36.6%	34.4%
Finance, insurance, real estate	78	48	61.5%	6.2%	5.1%
Services	279	186	66.7%	22.1%	19.6%
Government	97	83	85.6%	7.7%	8.8%
Totals	1,264	948	75.0%	100.0%	100.0%

Notes:

1. Export employment does not indicate actual total employment within an industry. Rather, export employment indicates the estimated number of jobs within an industry devoted to producing goods or services in excess of local demand. Total employment is not reported where necessary to maintain employer confidentiality.
2. n/a = not applicable
3. (D) = data not disclosed to ensure employer confidentiality
4. Percentages may not add to 100% due to non-disclosure within certain sectors.

Source:

Derived from confidential employment data provided by the California Employment Department (ES 202 records).

TABLE III-5b

**VALLEY EXPORT SECTOR:
EL DORADO COUNTY, JUNE 1993**

A. Largest export dependent industries, by location quotient

Rank	SIC Code	Industry	Location Quotient	Export Employment
1	7375	Information retrieval services	281.12	80
2	5561	Recreational & utility trailer dealers	261.64	71
3	3433	Fabricated metal: heating equipment	223.38	35
4	2672	Coated & laminated paper	79.48	12
5	1629	General contracting: misc. heavy construction	30.78	46
6	1521	General contractors: single-family houses	23.08	148
7	5641	Children's & infants' wear stores	21.88	10
8	3829	Miscellaneous measuring instruments	21.53	10
9	5023	Home furnishings	17.03	17
10	5932	Used merchandise stores	11.37	10

B. Largest export sector industries, by export employment size

Rank	SIC Code	Industry	Location Quotient	Export Employment
1	1521	General contractors: single-family houses	23.08	148
2	5411	Grocery stores	5.24	104
3	7375	Information retrieval services	281.12	80
4	5561	Recreational & utility trailer dealers	261.64	71
5	5812	Eating places	1.92	67
6	1629	General contracting: misc. heavy construction	30.78	46
7	3433	Fabricated metal: heating equipment	223.38	35
8	8351	Child day care services	8.31	27
9	5541	Gasoline service stations	5.72	25
10	6411	Insurance agents, brokers, & services	3.78	21
11	5023	Home furnishings	17.03	17

Note: Export employment does not indicate actual total employment within an industry. Rather, export employment indicates the estimated number of jobs within an industry devoted to producing goods or services in excess of local demand. Total employment is not reported where necessary to maintain employer confidentiality.

Source: Derived from confidential employment data provided by the California Employment Department (ES 202 records).

Appendix

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El Dorado County Economic Subregions Location Quotient Tables

SOURCE OF DATA AND CONFIDENTIALITY ISSUES

The analysis of economic subregions in El Dorado County presented in this report assigns employment to each subregion using the zip code in each employer's address. This geographic assignment by zip code relies on address-based business establishment records maintained for each county by the State Employment Development Department, the so-called *ES 202 records*.

The ES 202 file represents information reported by all employers at the time they pay quarterly unemployment contributions. The file includes the employer "trade name" and SIC code, address, and total number of employees

and payroll for each month in the quarterly reporting period.

ES 202 records contain confidential information, requiring the data to be reported in a manner that maintains the confidentiality of individual employers. This economic base analysis uses ES 202 data to present location quotient and export employment statistics for each 4-digit SIC industry category. In no case is absolute employment or payroll figures or other data on individual establishments revealed. Since many 4-digit SIC industry categories contain only one or a few individual businesses, absolute employment and payroll figures have also not been revealed at this level.

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METHODOLOGY

Through the State Unemployment Insurance reporting program, each employer lists a "reporting unit" address; this is the address given in the ES 202 records maintained by the State Employment Development Department. The address given may or may not correspond to the actual employment location. In many cases a separate administrative or accounting office address is given. Sole proprietors may use their home address in lieu of the business location address. In some cases the reporting unit address will be outside the county; this is typically the case in reporting federal and state government employment and larger firms with separate or regional administrative offices. So although employers are asked to assign employment by county, the difficulty lies in disaggregating employment into subregions within the county.

An initial consideration in using ES 202 records to disaggregate employment into separate subregions within the county was that employment for a single month had to be used in lieu of annual average employment. This was necessary because the State's ES 202 record system is not designed to reconcile average employment levels by individual reporting unit. This is understandable considering the constant turnover in local businesses from new business starts, business closures, and relocations. These factors would make reconciling even two separate monthly employment figures unwieldy for all but the smallest local economies with relatively few businesses.

June 1993 employment data were chosen for this analysis. The most current employment data available at the time this study was begun were for second quarter 1993. June was chosen to best reflect local employment during the "shoulder" season between winter and summer

tourism, recreation, and resource-based seasonal employment. In this respect, June 1993 employment figures will come closer to reflecting permanent rather than seasonal employment. While local industries with a significant seasonal employment component may as a result be underrepresented in the economic base analysis for individual economic subregions within the county, the full impact of these industries is accounted for in the countywide analysis found in Part II of this report.

The methodology used to assign June 1993 employment by economic subregion using ES . 202 employment data can be summarized as follows:

- 1) For most business establishments, location within the county could be determined from either the zip code or place name (e.g., Cameron Park) given in the full address. Eighty-seven percent of all employment in El Dorado County was directly assigned to economic subregions in this way.
- 2) Federal and state government employment reported from Washington, D.C. or other federal regional offices, or from state offices in Sacramento, was not assigned by economic subregion. This employment is scattered across the county and was left out of the subregional analysis altogether. Federal and state government employment is rolled in with local government employment and accounted for in the countywide analysis found in Part II of this report. Federal and state employment accounted for almost 4 percent of all employment in El Dorado County in June 1993.
- 3) Employment within the *Personal Services* industry category was also excluded from the analysis. Personal services employment includes domestic household employment and certain farm employment. Employment in this category is reported by the State Department of Social Services and is not disaggregated by address. Local employment within the personal services industry was 178 persons in June 1993, about one-half of one percent of total employment in the county.

3) The remaining 8.5 percent of the county's employment base was reported by private-sector business addresses located outside the county. This 9 percent proved the most difficult to assign by subregion. Strategies for verifying employment location within the county included cross-referencing establishments with 10 or more reported local employees in local telephone directories or phone surveying reporting units with 10 or more reported local employees when the local business establishment address could not be determined.

4) Employment reported by reporting units with less than 10 local employees was assigned to a specific subregion in instances where close proximity of the reporting unit to an economic subregion within the county indicated a likely commute relationship between the reporting address and the actual employment location. This assumption was made only in areas where a *captive commute* relationship could be assumed. A captive commute relationship exists in rural and/or remote areas where economic linkages between nearby communities, including commutes between reporting unit and employment location, can be expected to occur. In the case of El Dorado County, employment by reporting units with addresses located anywhere on the west side of Lake Tahoe was assigned to the county's Tahoe Basin economic subregion. The assumption here is that a reporting unit located within the Tahoe Basin is unlikely to be associated with an employment location somewhere on the western slope of El Dorado County. Distance and geographic barriers in this case would make such an association unfeasible or difficult at best. Even though rapid advancement in the application of communications technology has removed these barriers for many business transactions, physical proximity and access between an administrative or home address and the point-of-business location – particularly for smaller establishments – can still be assumed. This approach of assigning employment of smaller reporting units according a captive commute relationship was used in assigning some employment to the Tahoe Basin, High Sierra, and Foothills subregions. None of the

smaller reporting units located in Sacramento County were assumed to have a captive commute relationship with an El Dorado County establishment without address verification.

5) Finally, the remaining employment reported by reporting units located outside the county in which business establishment location within the county could not be verified or reasonably assumed was dropped from the analysis. The location of local business establishments for *all* reporting units reporting 10 or more local employees was verified.

Local employment reported in the ES 202 records was also dropped where it was possible to verify that local employment had been erroneously reported. In a few cases this counting of employment from outside the county was significant within specific industries. However, the effect on the countywide and subregional employment statistics presented in this report was negligible.



EL DORADO COUNTY LOCATION QUOTIENT ANALYSIS TAHOE BASIN SUBREGION, JUNE 1993

Page 1 of 6

SIC Code	Industry	Location Quotient	Export Employment
AGRICULTURE, FORESTRY, FISHING			
0721	Crop planting, cultivation, protection	2.28	6
0742	Veterinary specialties	1.91	10
0781	Landscape counseling, planning	4.35	9
0782	Lawn and garden services	0.22	
0971	Game propagation, hunting, trapping	15.87	1
	Export employment within sector		26
	Total employment within sector		51
	Percentage export employment within sector		51.7%
	Sector's share of total employment within sub-region		0.6%
	Sector's share of export employment within sub-region		0.9%
MINING			
CONSTRUCTION			
1521	General building contractors: single-family houses	2.40	64
1522	General building contractors: residential building	1.93	3
1611	General contracting: highway and street	3.02	22
1623	General contracting: water, sewer, pipeline, power	0.86	
1629	General contracting: heavy construction	0.09	
1711	Special trade contractors: plumbing, heating, air conditioning	1.55	18
1721	Special trade contractors: painting, paper hanging	2.14	14
1731	Special trade contractors: electrical work	0.76	
1741	Special trade contractors: masonry, stone setting work	2.87	8
1742	Special trade contractors: plastering, insulation work	0.10	
1743	Special trade contractors: terrazzo, tile, marble, mosaic work	0.23	
1752	Special trade contractors: floor laying, other work	1.65	4
1761	Special trade contractors: roofing, sheet metal work	2.43	19
1771	Special trade contractors: concrete work	0.79	
1791	Special trade contractors: structural steel erection	0.43	
1793	Special trade contractors: glass and glazing work	2.54	4
1794	Special trade contractors: excavation work	0.89	
	Total export employment		156
	Total employment within sector		342
	Percentage export employment within sector		45.7%
	Sector's share of total employment within sub-region		4.2%
	Sector's share of export employment within sub-region		3.2%
MANUFACTURING			
2393	Apparel & fabrics: textile bags	15.10	19
2411	Lumber & wood: logging	1.89	3
2434	Lumber & wood: wood kitchen cabinets	1.50	2
2711	Printing & publishing: newspaper publishing, printing	3.53	80
2752	Printing & publishing: commercial printing, lithographic	0.67	
2951	Petroleum refining: paving mixtures & blocks	7.12	4
3273	Stone, clay, glass, concrete: ready mix concrete	2.25	7
	Total export employment		118
	Total employment within sector		177

**EL DORADO COUNTY LOCATION QUOTIENT ANALYSIS
TAHOE BASIN SUBREGION, JUNE 1993**

Page 2 of 6

SIC Code	Industry	Location Quotient	Export Employment
Percentage export employment within sector			64.8%
Sector's share of total employment within sub-region			2.2%
Sector's share of export employment within sub-region			2.3%
TRANSPORTATION			
4111	Passenger transit & highway: local/suburban transit	15.72	29
4119	Passenger transit & highway: local passenger transportation	1.95	10
4121	Passenger transit & highway: taxicabs	1.11	
4214	Motor freight & warehousing: local trucking-with storage	1.64	4
4215	Motor freight & warehousing: courier services, except by air	1.95	22
4225	Motor freight & warehousing: refrigerated warehousing	0.13	
4489	Water transportation: passenger transportation	177.30	96
4493	Water transportation: marines	12.01	14
4724	Transportation services: travel agencies	0.65	
4729	Transportation services: passenger transportation arrangements	2.81	2
4813	Communications: telephone communications	0.26	
4841	Communications: cable/pay television services	1.66	8
4911	Electric, gas, & sanitary services: electric services	3.13	28
4932	Electric, gas, & sanitary services: gas/other services combined	0.77	
4952	Electric, gas, & sanitary services: sewerage systems	1601.88	102
4953	Electric, gas, & sanitary services: refuse systems	5.20	53
4959	Electric, gas, & sanitary services: sanitary services	1.87	1
Total export employment			369
Total employment within sector			493
Percentage export employment within sector			74.8%
Sector's share of total employment within sub-region			6.1%
Sector's share of export employment within sub-region			7.5%
WHOLESALE TRADE			
5013	Automotive parts & supplies	1.68	12
5023	Home furnishings	0.55	
5031	Lumber, plywood, and millwork	0.29	
5048	Medical supplies: ophthalmic goods	1.08	
5063	Electrical apparatus equipment	0.34	
5064	Electrical appliances	0.38	
5074	Plumbing & heating equipment & supplies	1.02	
5084	Industrial machinery & equipment	0.39	
5091	Sporting & recreational supplies	0.22	
5122	Drugs & drug proprietaries	0.14	
5136	Mens & boys clothing	15.26	64
5137	Womens, children, & infants clothing	0.74	
5139	Footwear	1.00	
5143	Dairy products	2.09	3
5145	Confectionery	0.71	
5147	Meats & meat products	3.78	15
5148	Fresh fruits & vegetables	0.68	
5149	Groceries and related products	1.36	7
5171	Petroleum bulk station/terminal	3.18	5
5172	Petroleum products wholesalers	2.05	5
5181	Wine & distilled alcohol beverages	2.17	8

EL DORADO COUNTY LOCATION QUOTIENT ANALYSIS TAHOE BASIN SUBREGION, JUNE 1993

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SIC Code	Industry	Location Quotient	Export Employment
	Total export employment		120
	Total employment within sector		237
	Percentage export employment within sector		50.5%
	Sector's share of total employment within sub-region		2.9%
	Sector's share of export employment within sub-region		2.4%

RETAIL TRADE

5211	Building materials: lumber & building materials dealer	1.83	27
5231	Building materials: paint, glass, wallpaper stores	4.52	16
5251	Building materials: hardware stores	4.37	26
5311	General merchandise: department stores	0.56	
5399	General merchandise: miscellaneous general merchandise	3.55	36
5411	Food stores: grocery stores	3.30	364
5421	Food stores: meat & fish markets	0.31	
5461	Food stores: retail bakeries	0.36	
5499	Food stores: miscellaneous food stores	3.31	17
5511	Auto dealers & gas stations: new/used car dealers	1.35	21
5531	Auto dealers & gas stations: auto & home supply stores	1.52	14
5541	Auto dealers & gas stations: gasoline service stations	1.23	8
5551	Auto dealers & gas stations: boat dealers	0.67	
5621	Apparel & accessory stores: women's clothing stores	1.64	15
5651	Apparel & accessory stores: family clothing stores	0.72	
5661	Apparel & accessory stores: shoe stores	2.18	16
5699	Apparel & accessory stores: misc. apparel & accessories	5.77	30
5712	Furniture: furniture stores	0.52	
5713	Furniture: floor covering stores	5.69	25
5714	Furniture: drapery & curtain & upholstery	2.92	3
5719	Furniture: miscellaneous home furnishings	5.09	31
5722	Furniture: household appliances	0.95	
5731	Furniture: radio & TV & electronic stores	1.66	6
5734	Furniture: computer & computer software stores	0.41	
5735	Furniture: record & prerecorded tape stores	0.35	
5736	Furniture: musical instrument stores	0.49	
5812	Eating places	2.85	922
5813	Drinking places	1.54	9
5912	Misc. retail: drug & proprietary stores	0.24	
5921	Misc. retail: liquor stores	2.67	14
5941	Misc. retail: sporting good & bicycle stores	3.17	33
5942	Misc. retail: book stores	3.75	25
5943	Misc. retail: stationery stores	0.32	
5944	Misc. retail: jewelry stores	1.76	6
5946	Misc. retail: camera & photographic stores	1.65	1
5947	Misc. retail: gift & novelty & souvenir shops	3.51	31
5948	Misc. retail: luggage & leather good stores	3.69	3
5961	Misc. retail: mail order houses	0.39	
5963	Misc. retail: direct selling establishments	1.80	4
5984	Misc. retail: liquified petroleum gas dealers	5.77	7
5992	Misc. retail: florists	2.08	8
5994	Misc. retail: news dealers & newsstands	12.31	5
5995	Misc. retail: optical goods stores	0.71	
5999	Misc. retail: other miscellaneous retail stores	0.80	

EL DORADO COUNTY LOCATION QUOTIENT ANALYSIS TAHOE BASIN SUBREGION, JUNE 1993

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SIC Code	Industry	Location Quotient	Export Employment
	Total export employment		1,744
	Total employment within sector		2,917
	Percentage export employment within sector		59.8%
	Sector's share of total employment within sub-region		35.9%
	Sector's share of export employment within sub-region		35.5%

FINANCE, INSURANCE, REAL ESTATE

6021	Banking: national commercial banks	0.50	
6036	Banking: savings institutions, not federal	0.79	
6162	Credit agencies: mortgage bankers	0.20	
6163	Credit agencies: loan brokers	3.46	8
6331	Insurance: fire, marine, & casualty insurance	0.56	
6361	Insurance: title insurance	1.45	5
6411	Insurance agents & brokers services	0.38	
6513	Real estate: operators of apartment buildings	0.81	
6531	Real estate: real estate agents & managers	1.78	53
6552	Real estate: subdividers & developers	0.12	
	Total export employment		66
	Total employment within sector		267
	Percentage export employment within sector		24.6%
	Sector's share of total employment within sub-region		3.3%
	Sector's share of export employment within sub-region		1.3%

SERVICES

7011	Hotels & other lodging: hotels & motels	10.62	1,079
7033	Hotels & other lodging: trailering parks & camp sites	16.10	23
7041	Hotels & other lodging: membership hotels & lodges	12.91	4
7213	Personal services: linen supply	0.16	
7216	Personal services: dry cleaning	2.48	11
7221	Personal services: photographic & portrait studios	5.12	22
7231	Personal services: beauty shops	0.40	
7261	Personal services: funeral services & crematories	0.74	
7291	Personal services: tax return preparation services	2.56	4
7299	Personal services: Misc. personal services	2.02	9
7334	Business services: photocopying & duplicating services	0.25	
7336	Business services: commercial art & graphic design	0.22	
7342	Business services: disinfect & exterminate services	1.22	2
7349	Business services: building cleaning & maintenance	0.48	
7353	Business services: heavy construction equip. renting & leasing	1.30	1
7359	Business services: equipment rental & leasing	1.51	7
7363	Business services: help supply services	0.10	
7381	Business services: detective & guard & armored car services	0.31	
7382	Business services: security systems services	0.50	
7389	Business services: business services	1.48	34
7514	Auto repair, service, garage: passenger car rental	1.28	3
7519	Auto repair, service, garage: trailer & recreational vehicle rental	4.51	5
7532	Auto repair, service, garage: upholstery & paint shops	1.83	12
7533	Auto repair, service, garage: automotive exhaust repair shops	0.88	
7537	Auto repair, service, garage: automotive transmission repair	2.11	2
7538	Auto repair, service, garage: general auto repair	1.36	7

EL DORADO COUNTY LOCATION QUOTIENT ANALYSIS TAHOE BASIN SUBREGION, JUNE 1993

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SIC Code	Industry	Location Quotient	Export Employment
7542	Auto repair, service, garage: car washes	0.18	
7549	Auto repair, service, garage: other auto services	0.99	
7623	Misc. repair services: refrigerator & air conditioning repair	3.00	3
7641	Misc. repair services: reupholstery & furniture repair	1.54	1
7692	Misc. repair services: welding repair	2.23	3
7699	Misc. repair services: repair shops & related services	0.42	
7841	Motion pictures: video tape rental	3.75	26
7911	Amusement & recreation: dance halls, studios, & schools	1.00	
7933	Amusement & recreation: bowling alleys	1.40	2
7991	Amusement & recreation: physical fitness facilities	0.29	
7992	Amusement & recreation: public golf courses	4.11	14
7997	Amusement & recreation: membership sport & recreation clubs	3.88	57
7999	Amusement & recreation: Misc. amusement & recreation	11.48	245
8011	Health services: physicians offices	0.94	
8021	Health services: dentists offices	2.10	57
8041	Health services: chiropractors offices	2.68	13
8042	Health services: optometrists offices	2.03	7
8043	Health services: podiatrists offices	0.66	
8049	Health services: Other health practioners offices	1.17	2
8062	Health services: general medical & surgical hospitals	1.93	175
8071	Health services: medical laboratories	0.60	
8093	Health services: specialty outpatient facilities	1.48	5
8111	Legal services	0.58	
8222	Educational services: junior colleges & technical institutes	366.70	273
8299	Educational services: schools & other educational services	0.90	
8322	Social services: Individual & family social services	1.45	15
8351	Social services: child day care services	3.69	68
8361	Social services: residential care	0.25	
8399	Social services: misc. social services	0.13	
8611	Membership organizations: business associations	2.23	8
8631	Membership organizations: labor unions & similar orgs.	0.12	
8641	Membership organizations: civic, social, & fraternal assoc.	1.71	19
8661	Membership organizations: religious organizations	0.08	
8699	Membership organizations: misc. membership orgs.	1.52	3
8711	Engineering & management services: engineering services	0.09	
8721	Engineering & management services: accounting, auditing, & bookke	0.35	
8741	Engineering & management services: management services	0.13	
8744	Engineering & management services: facilities management services	5.11	14
8748	Engineering & management services: business consulting services	0.09	
8811	Private households	0.04	
8999	Miscellaneous services	0.24	
Total export employment			2,231
Total employment within sector			3,285
Percentage export employment within sector			67.9%
Sector's share of total employment within sub-region			40.5%
Sector's share of export employment within sub-region			45.4%

NONCLASSIFIABLE

9999	Nonclassifiable businesses	1.15	4
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**EL DORADO COUNTY LOCATION QUOTIENT ANALYSIS
TAHOE BASIN SUBREGION, JUNE 1993**

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SIC Code	Industry	Location Quotient	Export Employment
	Total export employment		4
	Total employment within sector		32
	Percentage export employment within sector		13.2%
	Sector's share of total employment within sub-region		0.4%
	Sector's share of export employment within sub-region		0.1%
GOVERNMENT			
9131	Executive and legislative offices	1.38	82
9224	Fire protection	0.07	
	Total export employment		82
	Total employment within sector		316
	Percentage export employment within sector		26.0%
	Sector's share of total employment within sub-region		3.9%
	Sector's share of export employment within sub-region		1.7%
	Total export employment		4,913
	Total employment within sub-region		8,117
	Percentage export employment within sub-region		60.5%

Notes:

1. Location quotients are based on comparing the sub-region with the California state economy.
2. Export employment indicates assignment of a percentage of all jobs within an industry to the sub-region's export sector or economic base.

Source:

Derived from ES 202 records provided by the California Employment Development Department.

EL DORADO COUNTY LOCATION QUOTIENT ANALYSIS HIGH SIERRA SUBREGION, 1993

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SIC Code	Industry	Location Quotient	Export Employment
AGRICULTURE, FORESTRY, FISHING			
0172	Grape farms & vineyards	3.35	11
0173	Tree nuts	19.09	13
0175	Deciduous tree fruit farms	6.89	15
0179	Misc. fruit & tree nut farms	0.72	
0181	Ornamental floriculture & nursery product farms	1.49	2
0723	Crop preparation services for market	0.47	
0742	Veterinary services for animal specialties	14.41	27
0751	Livestock services, except for animal specialties	65.97	5
0762	Farm management services	28.29	34
0782	Lawn and garden services	2.18	6
0783	Ornamental shrub & tree services	24.76	13
0811	Timber tracts & tree farms	72.41	4
	Export employment within sector		129
	Total employment within sector		152
	Percentage export employment within sector		84.9%
	Sector's share of total employment within sub-region		10.2%
	Sector's share of export employment within sub-region		11.8%
MINING			
1442	Construction sand & gravel	17.57	6
	Export employment within sector		6
CONSTRUCTION			
1521	General contractors: single-family houses	10.60	81
1522	General contractors: residential building	1.76	
1541	General contracting: Nonresidential buildings	2.00	1
1629	General contracting: Misc. heavy construction	0.51	
1711	Special trade contractors: plumbing, heating, & air conditioning	1.00	
1731	Special trade contractors: electrical work	1.21	1
1742	Special trade contractors: Plastering, drywall, & insulation	0.52	
1752	Special trade contractors: floor laying & other floorwork	2.00	1
1771	Special trade contractors: concrete work	1.67	2
1791	Special trade contractors: structural steel erection	1.19	
1794	Special trade contractors: excavating & foundation work	9.74	5
	Total export employment		91
	Total employment within sector		122
	Percentage export employment within sector		74.8%
	Sector's share of total employment within sub-region		8.2%
	Sector's share of export employment within sub-region		8.3%

EL DORADO COUNTY LOCATION QUOTIENT ANALYSIS HIGH SIERRA SUBREGION, 1993

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SIC Code	Industry	Location Quotient	Export Employment
MANUFACTURING			
2033	Canned fruits, vegetables, preserves, jama, & jellies	5.59	11
2084	Food & kindred products: wines & brandy spirits	6.06	8
2411	Lumber & wood products: logging camps & contractors	131.16	75
2421	Sawmills & planing mills	205.81	287
2711	Printing & publishing: newspaper publishing, printing	0.17	
2731	Printing & publishing: book publishing, printing	1.44	
2752	Printing & publishing: commercial printing, lithographic...	1.61	3
3272	Concrete products, except block & brick	12.66	9
3429	Fabricated metal: Misc. hardware	1.90	1
3944	Games, toys, & children's vehicles, except dolls & bicycles	24.72	5
	Total export employment		383
	Total employment within sector		396
	Percentage export employment within sector		97.0%
	Sector's share of total employment within sub-region		26.6%
	Sector's share of export employment within sub-region		35.1%
TRANSPORTATION			
4212	Motor freight & warehousing: local trucking without storage	0.32	
4213	Motor freight & warehousing: trucking, except local	1.28	1
4215	Courier services, except by air	0.47	
4813	Communications: telephone communications	0.09	
4971	Electric, gas, & sanitary services: irrigation systems	408.48	23
	Total export employment		24
	Total employment within sector		34
	Percentage export employment within sector		71.4%
	Sector's share of total employment within sub-region		2.3%
	Sector's share of export employment within sub-region		2.2%
WHOLESALE TRADE			
5013	Automotive parts & supplies	6.12	17
5023	Home furnishings	1.51	1
5047	Medical, dental, & hospital equipment & supplies	3.14	4
5093	Scrap & waste materials	0.65	
5122	Drugs, drug proprietaries, & druggists' sundries	0.38	
5172	Petroleum products wholesalers	2.50	1
5193	Flowers, nursery & florist supplies	0.90	
5199	Misc. nondurable goods	0.60	
	Total export employment		23
	Total employment within sector		36
	Percentage export employment within sector		64.9%
	Sector's share of total employment within sub-region		2.4%
	Sector's share of export employment within sub-region		2.1%

EL DORADO COUNTY LOCATION QUOTIENT ANALYSIS HIGH SIERRA SUBREGION, 1993

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SIC Code	Industry	Location Quotient	Export Employment
RETAIL TRADE			
5211	Building materials: lumber & building materials dealer	3.17	13
5251	Hardware stores	10.54	14
5411	Grocery stores	3.47	75
5441	Candy, nut, & confectionery stores	7.55	3
5531	Auto & home supply stores	0.61	
5541	Gasoline service stations	3.51	16
5713	Floor covering stores	8.30	7
5734	Computer & computer software stores	3.89	5
5812	Eating places	2.67	152
5813	Drinking places	4.85	12
5912	Drug stores & proprietary stores	0.58	
5921	Liquor stores	1.27	
5945	Hobby, toy, & game shops	2.11	2
5961	Mail order houses	1.41	1
5984	Liquefied petroleum gas dealers	24.55	7
Total export employment			306
Total employment within sector			460
Percentage export employment within sector			66.5%
Sector's share of total employment within sub-region			31.0%
Sector's share of export employment within sub-region			28.0%

FINANCE, INSURANCE, REAL ESTATE			
6036	Savings institutions, not federal	6.39	21
6062	Credit unions, not federal	4.22	2
6411	Insurance agents, brokers, & service	0.11	
6512	Real estate: operators of nonresidential buildings	0.50	
6513	Real estate: operators of apartment buildings	0.26	
6515	Real estate: operators of residential mobile home sites	4.13	2
6531	Real estate: real estate agents & managers	2.35	17
Total export employment			42
Total employment within sector			63
Percentage export employment within sector			67.2%
Sector's share of total employment within sub-region			4.2%
Sector's share of export employment within sub-region			3.9%

SERVICES			
7011	Hotels, motels, & tourist courts	0.88	
7215	Coin-operated laundries & dry cleaning	4.82	2
7353	Business services: Heavy construction equipment renting & leasing	16.57	13
7371	Business services: Computer programming services	0.51	
7381	Business services: Detective, guard, & armored car	0.21	
7389	Business services: Other business services	0.32	
7538	Automotive services: General auto repair shops	1.37	1

**EL DORADO COUNTY LOCATION QUOTIENT ANALYSIS
HIGH SIERRA SUBREGION, 1993**

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SIC Code	Industry	Location Quotient	Export Employment
7629	Misc. repair services: Misc. electrical & electronic repair shops	2.20	1
7841	Video tape rental	3.52	4
7993	Amusement & recreation: Coin-operated amusement devices	27.69	5
7997	Amusement & recreation: Membership sports & recreation clubs	4.97	14
7999	Amusement & recreation: Misc. amusement & recreation services	2.57	7
8011	Health services: Physicians offices	0.39	
8021	Health services: Dentists offices	0.32	
8041	Health services: Chiropractors offices	2.20	2
8042	Health services: Optometrists offices	1.71	1
8049	Health services: Other health practioners offices	1.88	2
8092	Health services: Kidney dialysis centers	15.87	7
8111	Legal services	0.20	
8211	Educational services: Elementary & secondary schools	1.85	4
8299	Educational services: Misc. schools & educational services	4.16	8
8351	Social services: Child day care services	2.36	6
8361	Social services: Residential care	0.45	
8611	Membership organizations: Business associations	5.22	5
8711	Engineering services	1.19	2
8713	Surveying services	6.28	2
8721	Accounting, auditing, & bookkeeping services	1.02	
8741	Management services	0.28	
8743	Public relations services	1.61	
8748	Business consulting services	0.47	
8811	Private households	0.34	
Total export employment			87
Total employment within sector			192
Percentage export employment within sector			45.2%
Sector's share of total employment within sub-region			12.9%
Sector's share of export employment within sub-region			7.9%
NONCLASSIFIABLE			
9999	Nonclassifiable businesses	1.38	2
Total export employment			2
Total export employment			1,093
Total employment within sub-region			1,484
Percentage export employment within sub-region			73.7%

Notes:

1. Location quotients are based on comparing the sub-region with the California state economy.
2. Export employment indicates assignment of a percentage of all jobs within an industry to the sub-region's export sector or economic base.

Source:

Derived from ES 202 records provided by the California Employment Development Department.

EL DORADO COUNTY LOCATION QUOTIENT ANALYSIS FOOTHILL SUBREGION, JUNE 1993

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SIC Code	Industry	Location Quotient	Export Employment
AGRICULTURE, FORESTRY, FISHING			
0161	Vegetable and melon farms	0.06	
0172	Grape farms & vineyards	0.35	
0175	Deciduous tree fruit farms	1.30	9
0179	Misc. fruit & tree nut farms	0.13	
0181	Ornamental floriculture & nursery product farms	0.41	
0191	General farms, primarily crops	0.34	
0212	Beef cattle, except feedlots	0.57	
0253	Turkey ranches	2.75	3
0279	Misc. animal specialty farms	1.65	1
0721	Crop services: crop planting, cultivation, protection	2.27	13
0742	Veterinary services for animal specialties	3.23	52
0752	Livestock services	2.72	12
0761	Farm labor contractors & crew leaders	0.01	
0781	Landscape counseling & planning	1.38	2
0782	Lawn and garden services	0.76	
0783	Ornamental shrub & tree services	1.38	2
0851	Forestry services	1.15	
	Export employment within sector		93
	Total employment within sector		284
	Percentage export employment within sector		32.8%
	Sector's share of total employment within sub-region		1.7%
	Sector's share of export employment within sub-region		0.9%
MINING			
1422	Crushed & broken limestone quarrying	81.18	21
1429	Misc. crushed & broken stone quarrying	21.15	10
	Export employment within sector		31
	Total employment within sector		32
	Percentage export employment within sector		97.6%
	Sector's share of total employment within sub-region		0.2%
	Sector's share of export employment within sub-region		0.3%
CONSTRUCTION			
1521	General contractors: single-family houses	1.84	81
1522	General contractors: residential building	0.31	
1531	Operative builders	0.42	
1542	General contractors: nonresidential buildings	2.51	55
1611	General contracting: highway and street	11.96	252
1623	General contracting: water, sewer, pipeline, & power	0.41	
1629	General contracting: Misc. heavy construction	2.98	45
1711	Special trade contractors: plumbing, heating, & air conditioning	1.72	50
1721	Special trade contractors: painting, paper hanging, & decorating	1.88	22

**EL DORADO COUNTY LOCATION QUOTIENT ANALYSIS
FOOTHILL SUBREGION, JUNE 1993**

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SIC Code	Industry	Location Quotient	Export Employment
1731	Special trade contractors: electrical work	1.12	8
1741	Special trade contractors: masonry & stone setting work	0.84	
1742	Special trade contractors: plastering, drywall, & insulation work	1.25	11
1743	Special trade contractors: terrazzo, tile, marble, & mosaic work	1.55	5
1751	Special trade contractors: carpentering	1.91	21
1752	Special trade contractors: floor laying & other floorwork	1.74	8
1761	Special trade contractors: roofing & sheet metal work	0.94	
1771	Special trade contractors: concrete work	2.61	55
1781	Special trade contractors: water well drilling	4.58	10
1791	Special trade contractors: structural steel erection	7.93	67
1793	Special trade contractors: glass and glazing work	3.02	10
1794	Special trade contractors: excavating & foundation work	3.10	15
1799	Misc. special trade contractors	1.40	12
	Total export employment		729
	Total employment within sector		1,294
	Percentage export employment within sector		56.3%
	Sector's share of total employment within sub-region		7.6%
	Sector's share of export employment within sub-region		7.3%

MANUFACTURING

2084	Food & kindred products: wines & brandy spirits	1.16	3
2086	Food & kindred products: bottled & canned soft drinks & water	0.65	
2097	Food & kindred products: manufactured ice	7.80	8
2391	Apparel & textile products: curtains & draperies	1.49	1
2396	Apparel & textile products: automotive trimmings & related	0.62	
2411	Lumber & wood products: logging camps & contractors	11.23	68
2429	Lumber & wood products: special product sawmills	115.13	26
2431	Lumber & wood products: millwork	10.33	95
2434	Lumber & wood products: wood kitchen cabinets	2.73	15
2439	Lumber & wood products: structural wood members	6.60	19
2441	Lumber & wood products: wood boxes & shooks	81.77	138
2449	Lumber & wood products: misc. wood containers	2.72	3
2499	Lumber & wood products: misc. wood products	3.20	16
2511	Furniture & fixtures: wood household furniture	2.24	16
2541	Furniture & fixtures: wood partitions, shelving, & fixtures	1.34	2
2672	Paper & allied products: coated & laminated paper	2.30	3
2679	Paper & allied products: converted paper & paperboard products	0.24	
2711	Printing & publishing: newspaper publishing, printing	2.39	93
2721	Printing & publishing: periodicals publishing, printing	0.17	
2731	Printing & publishing: book publishing, printing	0.25	
2741	Printing & publishing: Miscellaneous publishing	0.08	
2752	Printing & publishing: commercial printing, lithographic	0.76	
2759	Printing & publishing: misc. commercial printing	0.11	
2842	Chemicals: specialty cleaning, polishing, & sanitation preparations	10.88	64

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SIC Code	Industry	Location Quotient	Export Employment
2851	Chemicals: paints, varnishes, lacquers, enamels, & allied	0.34	
3053	Rubber & plastics: gaskets, packing, & sealing devices	0.68	
3089	Rubber & plastics: misc. plastics products	0.13	
3199	Leather: misc. leather goods	3.66	5
3231	Stone, clay, glass, & concrete: glass containers	1.77	6
3273	Stone, clay, glass, & concrete: ready mix concrete	4.10	35
3366	Primary metal: misc. copper foundries	11.73	16
3429	Fabricated metal: Misc. hardware	0.41	
3433	Fabricated metal: heating equipment, except electric & warm air	3.99	7
3471	Fabricated metal: electroplating, plating, polishing, & anodizing	0.65	
3479	Fabricated metal: misc. coating, engraving, & allied	0.12	
3523	Machinery: farm machinery & equipment	0.69	
3531	Machinery: construction machinery & equipment	1.65	1
3532	Machinery: mining machinery & equipment	3.75	1
3544	Machinery: special dies & tools, jigs, & industrial molds	0.42	
3548	Machinery: electric & gas welding equipment	0.77	
3559	Machinery: misc. special industry machinery	0.10	
3589	Machinery: misc. service industry machines	0.43	
3599	Machinery: misc. machinery	0.68	
3663	Electrical & electronic machinery: radio & TV communication equip.	0.63	
3672	Electrical & electronic machinery: television picture tubes	0.12	
3679	Electrical & electronic machinery: misc. electronic components	0.46	
3711	Transportation equipment: motor vehicles & car bodies	1.76	7
3728	Transportation equipment: misc. aircraft parts & auxiliary equipment	0.14	
3827	Instruments: optical instruments & lenses	1.70	3
3842	Instruments: orthopedic, prosthetic, & surgical appliances & supplies	0.64	
Total export employment			649
Total employment within sector			1,022
Percentage export employment within sector			63.5%
Sector's share of total employment within sub-region			6.0%
Sector's share of export employment within sub-region			6.5%

TRANSPORTATION

4212	Motor freight & warehousing: local trucking without storage	1.63	46
4213	Motor freight & warehousing: trucking, except local	0.26	
4225	Motor freight & warehousing: general warehousing & storage	0.55	
4581	Air transportation: airports & flying fields	0.92	
4724	Transportation services: travel agencies	1.16	5
4731	Transportation services: freight transportation services	0.10	
4813	Communications: telephone communications	0.51	
4841	Communications: cable/pay television services	1.45	11
4939	Electric, gas, & sanitary services: misc. combination utilities	4.48	1
4941	Electric, gas, & sanitary services: water supply	36.98	175
4953	Electric, gas, & sanitary services: refuse systems	2.51	40

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SIC Code	Industry	Location Quotient	Export Employment
4959	Electric, gas, & sanitary services: sanitary services	1.18	1
4971	Electric, gas, & sanitary services: irrigation systems	1.54	
	Total export employment		278
	Total employment within sector		548
	Percentage export employment within sector		50.8%
	Sector's share of total employment within sub-region		3.2%
	Sector's share of export employment within sub-region		2.8%

WHOLESALE TRADE

5013	Automotive parts & supplies	1.01	
5023	Home furnishings	0.13	
5031	Construction materials: lumber, plywood, & millwork	5.89	71
5032	Construction materials: brick & stone	4.85	26
5044	Office equipment	0.25	
5045	Computers, peripherals, & software	0.02	
5047	Medical, dental, & hospital equipment & supplies	0.50	
5063	Electrical apparatus & equipment	0.06	
5065	Electronic parts & equipment	0.21	
5072	Hardware	0.47	
5074	Plumbing & heating equipment & supplies	3.51	36
5083	Farm & garden machinery & equipment	0.51	
5084	Industrial machinery & equipment	0.94	
5085	Industrial supplies	1.91	15
5087	Service establishment equipment & supplies	0.27	
5088	Transportation equipment & supplies, except cars	0.13	
5093	Scrap & waste materials	3.04	36
5094	Jewelry, watches, diamonds & other precious stones	0.32	
5099	Misc. durable goods	1.07	1
5113	Industrial & personal service paper	0.45	
5122	Drugs, drug proprietaries, & druggists' sundries	0.50	
5141	Groceries, general line	0.10	
5145	Confectionery	0.50	
5147	Meats & meat products	0.86	
5148	Fresh fruits & vegetables	0.10	
5149	Misc. groceries and related products	1.06	2
5162	Plastics materials	1.31	1
5169	Chemicals & allied products	0.08	
5171	Petroleum bulk stations & terminals	0.38	
5172	Petroleum products wholesalers	1.84	8
5181	Beer & ale	0.74	
5182	Wine & distilled alcohol beverages	0.28	
5191	Nondurable farm supplies	2.31	16
5193	Flowers, nursery & florist supplies	0.31	
5199	Misc. nondurable goods	2.96	75

EL DORADO COUNTY LOCATION QUOTIENT ANALYSIS FOOTHILL SUBREGION, JUNE 1993

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SIC Code	Industry	Location Quotient	Export Employment
	Total export employment		289
	Total employment within sector		663
	Percentage export employment within sector		43.6%
	Sector's share of total employment within sub-region		3.9%
	Sector's share of export employment within sub-region		2.9%

RETAIL TRADE

5211	Building materials: lumber & building materials dealer	0.57	
5231	Building materials: paint, glass, wallpaper stores	2.25	12
5251	Hardware stores	3.90	48
5261	Retail nurseries, lawn, & garden supplies	3.25	30
5271	Mobile home dealers	2.47	2
5311	Department stores	0.50	
5399	Miscellaneous general merchandise stores	3.81	83
5411	Grocery stores	2.13	398
5461	Retail bakeries	0.99	
5499	Miscellaneous food stores	1.84	13
5511	Motor vehicle dealers (new and used)	2.07	137
5521	Motor vehicle dealers (used only)	3.34	11
5531	Auto & home supply stores	1.94	53
5541	Gasoline service stations	1.97	73
5571	Motorcycle dealers	0.21	
5599	Miscellaneous automotive dealers	19.53	26
5621	Women's ready-to-wear clothing stores	0.78	
5651	Family clothing stores	0.29	
5661	Shoe stores	0.79	
5699	Misc. apparel & accessory stores	4.11	41
5712	Furniture stores	0.49	
5713	Floor covering stores	0.36	
5714	Drapery, curtain, & upholstery stores	2.43	4
5719	Miscellaneous home furnishing stores	0.95	
5722	Household appliance stores	0.71	
5731	Radio, television, & electronics stores	1.43	9
5734	Computer & computer software stores	1.83	17
5736	Musical instrument stores	1.86	4
5812	Eating places	1.30	311
5813	Drinking places	0.53	
5921	Liquor stores	7.82	124
5932	Used merchandise stores	0.36	
5941	Sporting goods stores & bicycle shops	0.69	
5942	Book stores	0.21	
5943	Stationery stores	1.07	1
5944	Jewelry stores	0.61	
5945	Hobby, toy, & game shops	0.31	
5947	Gift, novelty, & souvenir shops	0.74	

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SIC Code	Industry	Location Quotient	Export Employment
5949	Sewing, needlework, & piece goods stores	2.29	15
5961	Mail order houses	0.61	
5962	Automatic merchandising machine operators	1.76	4
5963	Direct selling establishments	0.09	
5983	Fuel oil dealers	6.35	1
5984	Liquefied petroleum gas dealers	15.83	49
5989	Misc. fuel dealers	52.95	5
5992	Florists	1.25	4
5994	News dealers & newsstands	4.87	4
5995	Optical goods stores	0.17	
	Total export employment		1,479
	Total employment within sector		3,807
	Percentage export employment within sector		38.8%
	Sector's share of total employment within sub-region		22.3%
	Sector's share of export employment within sub-region		14.8%

FINANCE, INSURANCE, REAL ESTATE

6021	National commercial banks	0.43	
6022	State banks	0.29	
6035	Federal savings institutions	0.39	
6036	Savings institutions, not federal	1.95	43
6061	Federal credit unions	1.71	11
6141	Personal credit institutions	0.18	
6153	Short-term business credit institutions	0.12	
6162	Mortgage bankers & loan correspondents	1.05	2
6163	Loan brokers	1.20	1
6211	Security brokers, dealers, & flotation companies	0.10	
6282	Investment advisors	0.29	
6311	Life insurance	0.03	
6324	Hospital & medical service plans	7.70	231
6331	Fire, marine, & casualty insurance	0.25	
6361	Title insurance	5.03	99
6371	Pension, health, & welfare funds	0.43	
6411	Insurance agents, brokers, & service	0.91	
6512	Real estate: operators of nonresidential buildings	2.36	31
6513	Real estate: operators of apartment buildings	0.16	
6514	Real estate: operators of dwellings other than apartments	0.26	
6515	Real estate: operators of residential mobile home sites	2.75	15
6531	Real estate: real estate agents & managers	0.81	
6552	Real estate: subdividers & developers	0.61	
6553	Real estate: cemetery subdividers & developers	0.67	
6732	Educational, religious, & charitable trusts	0.14	
6733	Trusts, except educational, religious, & charitable	0.17	
6796	Real estate investment trusts	7.31	3

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SIC Code	Industry	Location Quotient	Export Employment
6799	Investors, not elsewhere classified	1.56	2
	Total export employment		439
	Total employment within sector		1,028
	Percentage export employment within sector		42.7%
	Sector's share of total employment within sub-region		6.0%
	Sector's share of export employment within sub-region		4.4%

SERVICES			
7011	Hotels, motels, & tourist courts	0.25	
7021	Rooming & boarding houses	0.88	
7032	Sporting & recreational camps	3.38	6
7033	Trailer parks & camp sites for transients	2.87	6
7212	Personal services: Garment pressing & allied	1.64	7
7216	Personal services: Dry cleaning plants, except rug cleaning	0.20	
7217	Personal services: Carpet & upholstery cleaning	1.79	5
7219	Personal services: Misc. laundry & garment services	2.60	4
7221	Personal services: Photographic & portrait studios	0.45	
7231	Personal services: Beauty shops	2.10	52
7261	Personal services: Funeral services & crematories	1.17	1
7299	Personal services: Miscellaneous personal services	1.02	
7311	Business services: Advertising agencies	0.19	
7313	Business services: Radio, television, & publishers' advertising repres	4.62	10
7319	Business services: Miscellaneous advertising services	1.48	3
7334	Business services: Photocopying & duplicating services	0.24	
7335	Business services: Commercial photography	13.18	30
7336	Business services: Commercial art & graphic design	0.10	
7338	Business services: Court reporting	0.45	
7342	Business services: Disinfecting & exterminating services	0.32	
7349	Business services: Miscellaneous building cleaning & maintenance se	0.21	
7352	Business services: Medical equipment rental & leasing	0.27	
7353	Business services: Heavy construction equipment renting & leasing	0.10	
7359	Business services: Miscellaneous equipment rental & leasing	0.29	
7361	Business services: Employment agencies	0.81	
7363	Business services: Temporary help supply services	0.00	
7371	Business services: Computer programming services	0.29	
7372	Business services: Prepackaged software services	0.32	
7375	Business services: Information retrieval services	0.24	
7378	Business services: Computer maintenance & repair	1.70	5
7382	Business services: Security systems services	6.71	48
7383	Business services: News syndicates	1.56	
7384	Business services: Photofinishing laboratories	0.57	
7519	Automotive services: Trailer & recreational vehicle rental	0.31	
7532	Automotive services: Upholstery & paint shops	2.80	56
7533	Automotive services: Auto exhaust repair shops	5.45	11

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SIC Code	Industry	Location Quotient	Export Employment
7536	Automotive services: Auto glass replacement shops	0.92	
7537	Automotive services: Auto transmission repair shops	3.00	8
7538	Automotive services: General auto repair shops	1.79	33
7539	Automotive services: Misc. auto repair shops	1.47	5
7542	Automotive services: Car washes	0.15	
7549	Automotive services: Other auto services	1.07	1
7623	Misc. repair services: Refrigerator & air conditioning repair	2.28	4
7629	Misc. repair services: Misc. electrical & electronic repair shops	0.29	
7641	Misc. repair services: Reupholstery & furniture repair	0.73	
7699	Misc. repair services: Misc. repair shops & related services	0.51	
7833	Drive-in motion picture theaters	14.20	26
7841	Video tape rental	3.10	41
7911	Amusement & recreation: Dance halls, studios, & schools	3.09	9
7922	Amusement & recreation: Theatrical producers & services	0.16	
7929	Amusement & recreation: Bands, orchestras, actors, & other enterts	0.80	
7948	Amusement & recreation: Racing, incl. track operation	0.22	
7991	Amusement & recreation: Physical fitness facilities	0.03	
7993	Amusement & recreation: Coin-operated amusement devices	0.96	
7997	Amusement & recreation: Membership sports & recreation clubs	2.35	56
7999	Amusement & recreation: Misc. amusement & recreation services	3.69	133
8011	Health services: Physicians offices	1.04	10
8021	Health services: Dentists offices	1.89	97
8041	Health services: Chiropractors offices	1.97	15
8042	Health services: Optometrists offices	1.49	7
8049	Health services: Other health practioners offices	1.66	20
8051	Health services: Skilled nursing care facilities	0.72	
8052	Health services: Intermediate care facilities	36.03	135
8072	Health services: Dental laboratories	0.79	
8099	Health services: Misc. health & allied services	0.19	
8111	Legal services	0.40	
8211	Educational services: Elementary & secondary schools	67.02	3,703
8231	Educational services: Libraries & information centers	38.02	31
8299	Educational services: Misc. schools & educational services	0.49	
8322	Social services: Individual & family social services	1.25	18
8331	Social services: Job training & vocational rehab services	0.38	
8351	Social services: Child day care services	2.18	63
8361	Social services: Residential care	1.14	11
8399	Social services: Misc. social services	0.43	
8611	Membership organizations: Business associations	1.43	6
8641	Membership organizations: Civic, social, & fraternal associations	0.30	
8661	Membership organizations: Religious organizations	0.32	
8711	Engineering services	0.44	
8712	Architectural services	1.27	5
8713	Surveying services	2.45	5
8721	Accounting, auditing, & bookkeeping services	0.50	

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SIC Code	Industry	Location Quotient	Export Employment
8741	Management services	0.49	
8742	Management consulting services	0.67	
8743	Public relations services	0.70	
8748	Business consulting services	0.57	
8811	Private households	0.31	
8999	Miscellaneous services	0.68	
	Total export employment		4,688
	Total employment within sector		6,606
	Percentage export employment within sector		72.1%
	Sector's share of total employment within sub-region		38.1%
	Sector's share of export employment within sub-region		46.8%
NONCLASSIFIABLE			
9999	Nonclassifiable businesses	0.46	
	Total export employment		0
	Total employment within sector		27
	Percentage export employment within sector		0.0%
	Sector's share of total employment within sub-region		0.2%
	Sector's share of export employment within sub-region		0.0%
GOVERNMENT			
9131	Local executive & legislative offices	1.74	125
9224	Local & state fire protection	14.85	195
9229	Local public order & safety	3.96	451
9311	Local, state, & federal finance & taxation	1.59	36
9441	Local, state, & federal human resources programs	4.20	347
9511	Local, state, & federal air, water, & solid waste management	9.24	178
9512	Local, state, & federal land & wildlife conservation	0.17	
9611	Local, state, & federal economic programs	2.02	11
	Total export employment		1,343
	Total employment within sector		1,887
	Percentage export employment within sector		71.2%
	Sector's share of total employment within sub-region		11.0%
	Sector's share of export employment within sub-region		13.4%
	Total export employment		10,019
	Total employment within sub-region		17,098
	Percentage export employment within sub-region		58.6%

Notes:

1. Location quotients are based on comparing the sub-region with the California state economy.
2. Export employment indicates assignment of a percentage of all jobs within an industry to the sub-region's export sector or economic base.

Source:

Derived from ES 202 records provided by the California Employment Development Department.

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SIC Code	Industry	Location Quotient	Export Employment
AGRICULTURE, FORESTRY, FISHING			
0742	Veterinary services for animal specialties	1.15	(D)
MINING			
		n/a	n/a
CONSTRUCTION			
1521	General contractors: single-family houses	21.34	148
1542	General contractors: nonresidential buildings	1.10	
1629	General contracting: Misc. heavy construction	28.46	46
1711	Special trade contractors: plumbing, heating, & air conditioning	1.16	1
1731	Special trade contractors: electrical work	0.20	
1743	Special trade contractors: terrazzo, tile, marble, & mosaic work	4.41	2
1751	Special trade contractors: carpentering	3.39	4
1761	Special trade contractors: roofing & sheet metal work	0.47	
1771	Special trade contractors: concrete work	1.54	1
	Total export employment		203
	Total employment within sector		227
	Percentage export employment within sector		89.3%
	Sector's share of total employment within sub-region		17.7%
	Sector's share of export employment within sub-region		21.1%
MANUFACTURING			
2672	Paper & allied products: coated & laminated paper	73.48	12
2711	Printing & publishing: newspaper publishing, printing	1.39	2
3089	Rubber & plastics: misc. plastics products	0.28	
3433	Fabricated metal: heating equipment, except electric & warm air	206.51	35
3548	Machinery: electric & gas welding equipment	41.14	4
3599	Machinery: misc. machinery	6.14	14
3829	Instruments: misc. measuring instruments	19.90	10
3949	Other sporting & athletic goods	4.37	3
3999	Miscellaneous manufacturing industries	3.52	1
	Total export employment		82
	Total employment within sector		93
	Percentage export employment within sector		87.9%
	Sector's share of total employment within sub-region		7.2%
	Sector's share of export employment within sub-region		8.5%
TRANSPORTATION			
4724	Transportation services: travel agencies	3.63	(D)
4899	Other communication services	2.52	(D)

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SIC Code	Industry	Location Quotient	Export Employment
Total export employment			(D)
Total employment within sector			(D)
WHOLESALE TRADE			
5023	Home furnishings	15.74	17
5043	Photographic equipment and supplies	2.64	1
5045	Computers, peripherals, & software	0.68	
5112	Stationery supplies	3.02	3
5199	Misc. nondurable goods	0.70	
Total export employment			20
Total employment within sector			28
Percentage export employment within sector			72.0%
Sector's share of total employment within sub-region			2.2%
Sector's share of export employment within sub-region			2.1%
RETAIL TRADE			
5211	Building materials: lumber & building materials dealer	2.70	9
5251	Hardware stores	7.31	8
5411	Grocery stores	4.84	102
5531	Auto & home supply stores	1.41	2
5541	Gasoline service stations	5.29	24
5561	Recreational & utility trailer dealers	241.87	71
5641	Children's & infants' wear stores	20.23	10
5699	Misc. apparel & accessory stores	2.03	1
5713	Floor covering stores	1.20	
5734	Computer & computer software stores	7.71	10
5812	Eating places	1.78	61
5921	Liquor stores	3.66	4
5932	Used merchandise stores	10.51	10
5945	Hobby, toy, & game shops	3.25	3
5947	Gift, novelty, & souvenir shops	1.55	1
5992	Florists	3.51	3
5999	Other retail stores	3.81	9
Total export employment			326
Total employment within sector			462
Percentage export employment within sector			70.6%
Sector's share of total employment within sub-region			36.0%
Sector's share of export employment within sub-region			34.0%
FINANCE, INSURANCE, REAL ESTATE			
6036	Savings institutions, not federal	1.18	1
6162	Mortgage bankers & loan correspondents	1.24	1
6211	Security brokers, dealers, & flotation companies	0.32	

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SIC Code	Industry	Location Quotient	Export Employment
6361	Title insurance	5.40	8
6411	Insurance agents, brokers, & service	3.50	20
6531	Real estate: real estate agents & managers	2.06	11
6552	Real estate: subdividers & developers	5.95	7
	Total export employment		48
	Total employment within sector		78
	Percentage export employment within sector		61.2%
	Sector's share of total employment within sub-region		6.1%
	Sector's share of export employment within sub-region		5.0%

SERVICES		Location Quotient	Export Employment
7212	Personal services: Garment pressing & allied	5.74	4
7217	Personal services: Carpet & upholstery cleaning	4.34	2
7231	Personal services: Beauty shops	1.68	2
7311	Business services: Advertising agencies	0.85	
7349	Business services: Miscellaneous building cleaning & maintenance s	1.24	2
7371	Business services: Computer programming services	2.93	7
7375	Business services: Information retrieval services	259.88	80
7389	Business services: Other business services	0.64	
7532	Automotive services: Upholstery & paint shops	6.44	13
7539	Automotive services: Misc. auto repair shops	2.45	1
7542	Automotive services: Car washes	0.51	
7699	Misc. repair services: Misc. repair shops & related services	0.75	
7841	Video tape rental	4.07	5
7997	Amusement & recreation: Membership sports & recreation clubs	0.96	
7999	Amusement & recreation: Misc. amusement & recreation services	2.97	7
8011	Health services: Physicians offices	0.45	
8021	Health services: Dentists offices	1.60	5
8041	Health services: Chiropractors offices	4.23	4
8049	Health services: Other health practioners offices	2.17	3
8093	Health services: Specialty outpatient facilities	1.76	1
8111	Legal services	0.08	
8299	Educational services: Misc. schools & educational services	1.75	2
8351	Social services: Child day care services	7.68	27
8361	Social services: Residential care	0.35	
8611	Membership organizations: Business associations	2.01	1
8721	Accounting, auditing, & bookkeeping services	1.31	2
8731	Commercial physical & biological research	0.82	
8734	Testing laboratories	8.62	8
8742	Management consulting services	1.11	0
8748	Business consulting services	0.54	
8811	Private households	0.53	
8999	Miscellaneous services	18.20	11

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SIC Code	Industry	Location Quotient	Export Employment
	Total export employment		186
	Total employment within sector		279
	Percentage export employment within sector		66.7%
	Sector's share of total employment within sub-region		21.7%
	Sector's share of export employment within sub-region		19.4%
NONCLASSIFIABLE			
9999	Nonclassifiable businesses.	2.05	(D)
	Total export employment		(D)
	Total employment within sector		(D)
GOVERNMENT			
9131	Local executive & legislative offices	5.82	61
9224	Local & state fire protection	21.76	22
	Total export employment		83
	Total employment within sector		97
	Percentage export employment within sector		85.8%
	Sector's share of total employment within sub-region		7.6%
	Sector's share of export employment within sub-region		8.7%
	Total export employment		960
	Total employment within sub-region		1,284
	Percentage export employment within sub-region		74.7%

Notes:

1. Location quotients are based on comparing the sub-region with the California state economy.
2. Export employment indicates assignment of a percentage of all jobs within an industry to the sub-region's export sector or economic base.

Source:

Derived from ES 202 records provided by the California Employment Development Department.

Industry Multipliers for El Dorado County and the State

The following two pages present *industry and consumer spending multipliers* for El Dorado County and the state as a whole. Industry multipliers provide a rough index of the impact to the local economy from additional or lost employment within a given local industry. This impact is often referred to as the "ripple effect" through the local economy created by new or lost jobs. Multipliers are given for most 2-digit Standard Industrial Classification (SIC) industry categories depending on the size of each industry in the local economy.

The industry multipliers were produced by the California Trade and Commerce Agency using IMPLAN, a system developed by the University of Minnesota based upon *input-output* analysis. A brochure produced by the Trade and Commerce Agency explaining the use of industry multipliers to measure the local economic

benefit of new employment is reproduced in this report following the multiplier tables.

Readers should use caution in interpreting and applying these multipliers. The multipliers were prepared in 1992 based on 1987 data, the most current data available at the time. Consequently, the magnitude of the local multiplier effect within many industries will have changed.

Though the Trade and Commerce Agency considers the 1992 set of county multipliers to be out of date, they remain useful in assessing the relative impact of local employment in different industries. Industry multipliers can be considered another tool for identifying the desired industry mix to ensure local economic diversification and sustainability.

El Dorado County Job Multipliers

Industry	Job Multiplier from	
	Industry Spending	Industry and Consumer Spending
Dairy Farm Production	1.07	1.23
Livestock, Poultry Production	1.47	1.70
Grains	1.63	1.88
Hay and Pasture	1.74	2.01
Fruits and Nuts	1.04	1.20
Vegetables	1.12	1.30
Ag Services, Forestry, Fishing	1.08	1.24
Building Construction	1.97	2.28
Heavy Construction	1.27	1.47
Meat Products	1.61	1.86
Other Textile Products	1.12	1.29
Lumber and Wood Products	1.47	1.70
Furniture and Fixtures	1.21	1.40
Paper and Allied Products	1.19	1.37
Printing and Publishing	1.25	1.44
Chemicals and Allied Products	1.85	2.13
Rubber and Plastic Products	1.18	1.36
Stone, Clay, and Glass Products	1.26	1.46
Fabricated Metal Products	1.16	1.34
Industrial, Commercial Machinery	1.14	1.32
Electronic Components	1.37	1.58
Motor Vehicles, Ships	1.22	1.41
Aerospace	1.25	1.44
Medical Instruments, Optical Goods	1.31	1.51
Miscellaneous Manufacturing	1.15	1.33
Local and Interurban Transit	1.14	1.32
Trucking and Warehousing	1.16	1.34
Water Transportation	2.19	2.53
Air Transportation	1.41	1.63
Transportation Services	1.16	1.34
Communications	1.32	1.53
Utilities	1.64	1.89
Wholesale Trade	1.23	1.42
Retail Trade	1.18	1.36
Eating and Drinking Places	1.11	1.28
Finance	1.20	1.39
Insurance	1.80	2.08
Real Estate	1.32	1.53

Industry	Job Multiplier from	
	Industry Spending	Industry and Consumer Spending
Business Services	1.14	1.32
Hotels and Other Lodging	1.14	1.32
Computer Services	1.16	1.34
Personal Services	1.06	1.22
Miscellaneous Repair Services	1.04	1.20
Professional Services	1.18	1.37
Auto Repair, Services, Parking	1.25	1.44
Motion Pictures	1.41	1.63
Amusement, Recreation Services	1.17	1.36
Health Services	1.18	1.36
Educational Services	1.14	1.32
Membership Organizations	1.19	1.38
Social Services	1.08	1.25

The industry spending multiplier shows the jobs generated as an industry buys goods and services from other industries in the area.

The industry and consumer spending multiplier includes all jobs generated from industry spending, plus the jobs generated by employees' consumer spending.

All of the job multipliers already include the initial direct job. Therefore, the indirect job impact is the multiplier minus one.

The multipliers were produced by the California Trade & Commerce Agency using IMPLAN, a system developed by the University of Minnesota. The original source of data for this system was the U.S. Department of Commerce.

For more information on how to use job multipliers, please read the accompanying brochure, *Using County Job Multipliers*, available from the California Trade & Commerce Agency.

California Statewide Job Multipliers

Industry	Job Multiplier from	
	Industry Spending	Industry and Consumer Spending
Dairy Farm Production	1.15	1.29
Livestock, Poultry Production	2.25	2.52
Cotton Crops	2.48	2.78
Grains	1.99	2.23
Hay and Pasture	2.24	2.51
Fruits and Nuts	1.14	1.28
Vegetables	1.28	1.43
Other Crops	1.33	1.49
Ag Services, Forestry, Fishing	1.17	1.32
Metal Mining	1.35	1.52
Fuel Mining	1.37	1.54
Nonmetal Mining	1.46	1.63
Building Construction	1.55	1.74
Heavy Construction	1.49	1.68
Meat Products	1.82	2.05
Dairy Products	2.32	2.60
Canned, Preserved, Frozen Food	2.59	2.91
Grain Mill Products	2.51	2.82
Bakery Products	1.52	1.71
Sugar and Confectionery Products	2.18	2.45
Beverages	2.76	3.09
Fats and Oils	2.90	3.26
Miscellaneous Food Products	2.24	2.52
Textile Mill Products	1.42	1.60
Apparel	1.23	1.38
Other Textile Products	1.30	1.46
Lumber and Wood Products	1.62	1.82
Furniture and Fixtures	1.37	1.54
Paper and Allied Products	1.51	1.69
Printing and Publishing	1.41	1.58
Chemicals and Allied Products	2.20	2.47
Pharmaceutical Products	1.93	2.16
Petroleum and Coal Products	4.82	5.41
Rubber and Plastic Products	1.38	1.55
Leather and Related Products	1.35	1.52
Stone, Clay, and Glass Products	1.43	1.61
Primary Metal Products	1.54	1.72
Fabricated Metal Products	1.34	1.50

Industry	Job Multiplier from	
	Industry Spending	Industry and Consumer Spending
Industrial, Commercial Machinery	1.30	1.46
Computers and Office Equipment	2.39	2.69
Electrical Equipment	1.39	1.56
Electronic Equipment	2.00	2.24
Electronic Components	1.74	1.95
Motor Vehicles, Ships	1.47	1.65
Aerospace	1.58	1.78
Medical Instruments, Optical Goods	1.44	1.61
Miscellaneous Manufacturing	1.36	1.52
Railroad Transportation	1.46	1.64
Local and Interurban Transit	1.22	1.37
Trucking and Warehousing	1.31	1.47
Water Transportation	2.65	2.97
Air Transportation	1.79	2.01
Pipelines, Except Natural Gas	3.00	3.37
Transportation Services	1.30	1.46
Communications	1.47	1.65
Utilities	1.99	2.24
Wholesale Trade	1.34	1.51
Retail Trade	1.26	1.41
Eating and Drinking Places	1.23	1.38
Finance	1.34	1.50
Insurance	1.84	2.07
Real Estate	1.45	1.63
Business Services	1.15	1.29
Hotels and Other Lodging	1.21	1.35
Computer Services	1.31	1.47
Personal Services	1.10	1.23
Miscellaneous Repair Services	1.13	1.27
Professional Services	1.28	1.43
Auto Repair, Services, Parking	1.43	1.60
Motion Pictures	1.89	2.12
Amusement, Recreation Services	1.38	1.55
Health Services	1.28	1.43
Educational Services	1.16	1.30
Membership Organizations	1.24	1.39
Social Services	1.13	1.26

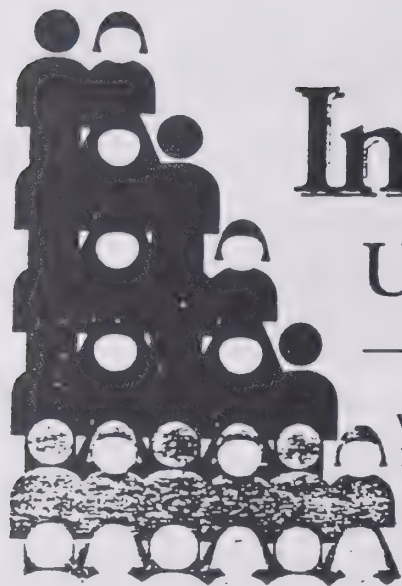
The industry spending multiplier shows the jobs generated as an industry buys goods and services from other industries in the area.

The industry and consumer spending multiplier includes all jobs generated from industry spending, plus the jobs generated by employees' consumer spending.

All of the job multipliers already include the initial direct job. Therefore, the indirect job impact is the multiplier minus one.

The multipliers were produced by the California Trade & Commerce Agency using IMPLAN, a system developed by the University of Minnesota. The original source of data for this system was the U.S. Department of Commerce.

For more information on how to use job multipliers, please read the accompanying brochure, *Using County Job Multipliers*, available from the California Trade & Commerce Agency.



Impact of New Jobs

Using Multipliers to Measure Benefits

When a plant expands, or a new firm locates in an area, it creates jobs throughout the area's economy. As the firm buys supplies and materials from local businesses, it generates jobs with those suppliers. New payrolls flow through the area, creating jobs in retail stores and other businesses

serving consumers. Similarly, a plant closure can often result in widespread job losses in an area. Yet, how does one measure these effects, particularly for an important factor like employment?

This frequently-asked question can often be answered by using job multipliers that show the indirect jobs supported by each job in a particular industry. Multipliers can be used to estimate the job benefits of a new plant, or the losses resulting from a plant closure. Multipliers provide valuable information even when no expansions or closures have occurred because the size of a multiplier indicates the importance of an industry to the economy.

What is a Job Multiplier?

A job multiplier for a particular industry shows the total number of jobs supported by each job in the industry. For example, the multiplier for the furniture industry in California is 1.54. This means that every job in the furniture industry supports just over half a job elsewhere in the state's economy. Multipliers are always greater than one because the one represents the original job in the industry in question.

Types of Multipliers

Two types of job multipliers are available from the Department of Commerce. The industry spending multiplier shows jobs supported by industry spending only. These are jobs generated as an industry buys goods and services from other industries in the area, plus jobs generated by the successive rounds of spending as these other industries in turn buy from other local industries.

The industry and consumer spending multiplier also includes jobs generated by employees' consumer spending. This multiplier shows jobs generated by purchases from other industries, jobs generated by employees' spending, and jobs generated by the successive rounds of industry and consumer spending as other industries and their employees buy goods and services in the area.

Several other types of multipliers can also be used to examine economic development impacts. For more information on these, and on the techniques used to develop multipliers, consult the sources listed under *Additional Information*, next page.

This publication examines the benefits and limitations of using multipliers to measure job impacts. It is also a companion to the County Job Multiplier sheets available from the California Department of Commerce, and should be consulted when using them.

Using Multipliers

Multipliers are most commonly used in determining the number of "spin-off" jobs generated by a new plant or facility in a specific region. Multiplying the original number of jobs at the new facility by the appropriate multiplier provides an estimate of the total jobs impact.

The multipliers for electronic components in Shasta County, for example, are 1.44 (Industry Spending) and 1.62 (Industry and Consumer Spending). These numbers show that a semiconductor plant with 100 jobs would generate a total of 62 other jobs in the county. The industry

spending-multiplier shows that spending by the new plant on supplies and services generates about 44 jobs. The remaining 18 jobs result from employees' consumer spending.

Multipliers can also be used to estimate the jobs impact of a plant closure. Since the multiplier for an industry indicates the number of jobs at suppliers and other local businesses supported by each job in the industry, the overall job losses from a plant closure can be estimated by multiplying the number of jobs lost at the plant by the multiplier for that industry.

Department of Commerce Multiplier Sheets

The multiplier sheets available with this brochure provide county job multipliers for up to 75 industries and all 58 California counties. The sheets include multipliers for an industry only when that county already has a significant number of jobs in that industry. As a result, the sheets for smaller counties list relatively few

industries. If a county sheet does not include multipliers covering an industry of interest, multipliers for that industry in a similar county can be substituted.

Statewide multipliers are also available. The multipliers on the California sheet show statewide job impacts, which are normally larger than county job impacts. Statewide multipliers should not be used as a substitute for county multipliers.

Additional Information

More information on multipliers is available in the following publications:

Benchmark Input-Output Accounts for the U.S. Economy. In *Survey of Current Business*, July 1991 issue. U.S. Department of Commerce, Bureau of Economic Analysis.

Economic Practices Manual. California Office of Planning and Research. 1982.

Input-Output Analysis: Foundations and Extensions. Ronald E. Miller and Peter D. Blair. Prentice-Hall. 1985.

Measuring Economic Impacts, Bulletin 210. California Department of Water Resources. 1980.

Regional Development and Plan Evaluation: the Use of Input-Output Analysis, Agriculture Handbook 530. U.S. Department of Agriculture, Economics, Statistics and Cooperatives Service. 1978

Regional Multipliers: A User Handbook for the Regional Input-Output Modeling System. U.S. Department of Commerce, Bureau of Economic Analysis. 1986.

The multipliers were produced by the California Department of Commerce using IMPLAN, a system developed by the University of Minnesota. The original source of data for this system was the U.S. Department of Commerce.

For more information, or to request multiplier sheets, contact:

Publication Coordinator
Office of Economic Research
California Department of Commerce
801 K Street, Suite 1600
Sacramento, California 95814
(916) 324-5854

Examples of County Job Multipliers

Job multipliers vary by industry and by county. Industries that make extensive use of locally-produced supplies and materials have high multipliers. Industries buying most of their materials from outside the area tend to have low multipliers.

Multipliers tend to be higher in large urban counties because more spending by local industries stays in the area. Smaller, rural counties generally have lower multipliers because industries turn to firms outside the area for supplies and services. Multipliers for the state as a whole are normally higher than multipliers for a county because a state multiplier for an industry shows all of the jobs in California supported by each job in the industry; a county multiplier shows only the jobs supported in that particular county.

The chart below shows some examples of county job multipliers. Multipliers for the electronic equipment industry are generally high because electronics manufacturers buy many components and subassemblies from other firms. Multipliers are particularly high in counties with a well-established electronics industry. Santa Clara

County has a large multiplier because this area is a leading producer of semiconductors.

Industries processing materials produced by other industries in the area usually have high multipliers, because jobs in the producing industries are linked to jobs in the processing industry. The dairy products industry, for example, has high multipliers, reflecting jobs in dairy farms and jobs with businesses supplying these farms. This county multiplier varies, depending on the extent to which the industry processes milk produced in the same county.

As explained in *Limitations of Multipliers* (back page), there is rarely a fixed cause-and-effect link between production in food processing and production in agriculture. Multipliers for most industries in the food products group should be used with caution. Industries which do not buy significant amounts of materials produced locally generally have smaller multipliers. The lodging industry and the trucking and warehousing industry have lower multipliers because hotels and trucking companies do not buy goods and services from other local businesses to the same extent as manufacturing firms.

Industry and Consumer Spending Multipliers Selected Industries and Counties



	Los Angeles	Fresno	Santa Clara	Nevada	Humboldt
Electronic Equipment	2.02	1.6	2.16	1.55	Not Available
Dairy Products	1.67	2.13	1.71	Not Available	1.92
Lumber and Wood Products	1.49	1.49	1.41	1.65	1.65
Building Construction	1.59	1.54	1.62	1.47	1.59
Trucking and Warehousing	1.42	1.42	1.36	1.29	1.38
Hotels, Lodging Places	1.33	1.29	1.29	1.26	1.25

Limitations of Multipliers

It is important to understand the limitations of job estimates based on multipliers. Multipliers are developed from several assumptions about the flow of goods and services between industries. The most important assumption is that trading patterns between industries are fixed. That is, each industry buys supplies from local and outside industries in fixed proportions, and production by suppliers automatically rises and falls with production in the purchasing industry.

It follows from this assumption that multipliers will estimate jobs gains realistically only if new plants buy from local industries in the same proportion as existing plants in the area. Moreover, local industries must be able to increase their production to supply the new plant. These conditions are rarely met completely. As a result,

multipliers usually overestimate indirect job impacts.

Multipliers should only be applied to projects that are a genuine source of new jobs in the area. Incoming firms providing services to local businesses or consumers are not always a real source of new jobs, since they often take business from firms already in the area.

New retail or entertainment developments create jobs only if they capture spending that formerly left the area, or if they attract outside spending. In many cases, spending at a new development is offset by a reduction in spending at other businesses, since local consumers have only so much money to spend. Consequently, there may be no net job gains following a development of this kind.

Two cases in which multipliers should be used with particular caution

Industries Processing Local Materials

In many cases, there is not a fixed cause-and-effect relationship between production in an industry producing materials and industries processing these materials.

For example, if a new frozen food plant opens, farm production does not automatically increase to supply the plant. The level of agricultural production in an area is set by other considerations, such as the availability of suitable land and water. Actual job gains following an expansion are usually much smaller than indicated by multipliers.

Similarly, farm production does not automatically drop when a plant closes. Many canneries have closed in the past decade, but these closures have occurred because consumers are buying more fresh and frozen food and growers are producing for this market. In cases like these, the high indirect job impacts indicated by multipliers do not occur because changes in the processing industry do not affect producers in the way assumed by multipliers.

Plant Closures

Multipliers usually overestimate the effect of plant closures. The assumption of fixed trading patterns implies that suppliers always cut production and lay off workers in proportion to the amount of product formerly supplied to the closing plant.

In reality, businesses are always adapting to changing conditions. When a plant closes, most of its suppliers can make up some of their losses in business by finding new markets in other areas. Growth in other parts of the area's economy will often provide opportunities for these firms.

A plant closure will hurt suppliers, but there is rarely a strict proportional relationship between jobs lost at a closing plant and jobs lost at suppliers. Job multipliers give an upper limit on the jobs lost due to a plant closure rather than the most reasonable estimate of this figure.

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Chapter 11

LAKE TAHOE BASIN

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Chapter 11

LAKE TAHOE BASIN

NOTE: The discussion that follows pertains specifically to the Tahoe Basin and reflects the unique institutional and governmental circumstances that exist with respect to the Tahoe Regional Planning Agency (TRPA) and The Regional Plan for the Lake Tahoe Basin. Discussions of Tahoe Basin resources can be found in all other elements of Volume II, particularly the conservation, health and safety, housing, and land use elements.

INTRODUCTION

The Lake Tahoe Basin, located on the California-Nevada border, is part of two counties in Nevada and three counties in California including El Dorado County. El Dorado County contains the southwest portion of the Tahoe Basin including the City of South Lake Tahoe. The focal point of the Basin is Lake Tahoe, world renowned for clarity as well as depth and elevation. The Tahoe Basin also contains a variety of distinct natural environments including wetlands, stream zones, coniferous forests, aspen groves, sagebrush, chaparral, alpine vegetation, and bare granite exposures found both widely dispersed and within close proximity to one another. Because of its unparalleled natural beauty and the variety of recreation opportunities available, the Tahoe Basin has been a major destination-recreation resort area since the late 1800s.

Prior to 1900, the Basin was a minor way station for the westward migration to the California gold fields. The later "reverse migration" to the Virginia City silver mines was significant and saw the construction of the toll road that later became U.S. Highway 50 and Pioneer Trail. Several way stations were also established along the route during this era. The area was then subjected to intensive logging to supply the silver mines with wood for both mine timbers and fuel. This activity resulted in water quality and vegetative diversity impacts that persist to this day. The short-lived Pony Express route coursed through the Basin along the current alignment of Pioneer Trail and U.S. Highway 50. Many lakeside resorts, hotels, and estates were established during this period. Other than a few hearty families that braved hash winter conditions, year round occupancy of the area was limited and seasonal use of the area prevailed into the late 1950s.

The attraction to the Tahoe area was enhanced by the 1960 winter Olympics in Squaw Valley when the State, Nation, and world were exposed to the region. Substantial improvements in snow removal techniques and upgrading of local infrastructure also occurred at this time. This, along with rapid population growth in nearby market areas, encouraged expansion of the gaming and ski industries. A flurry of residential and commercial subdivision of land and related road building activity followed. Increased traffic, wood burning stoves, dredging and filling of the

Truckee River Marsh, vast expanses of runoff-creating pavement, poorly treated sewage, and septic systems in sandy soils resulted in air and water quality degradation and subsequent loss of clarity in the Lake. This caused widespread public concern about the relationship between the natural environment of the Basin and the human-caused additions and alterations. In response to this concern, the U.S. Congress enacted Public Law 91-148 of the 91st Congress on December 18, 1969, establishing the Interstate Compact between California and Nevada with, among others, the following finding:

"It is further found and declared that there is a need to maintain an equilibrium between the region's natural endowment and its man-made environment, and to preserve the scenic beauty and recreational opportunities of the region."

After several years of uncoordinated "regional" planning at the individual State level, the U.S. Congress and the States of California and Nevada adopted an amended interstate compact (Public Law 96-551, 94 Statute 3233) and established the Tahoe Regional Planning Agency (TRPA) in 1980. The Bi-State Compact required the adoption of Environmental Threshold Carrying Capacities to set standards for the region. That done, the Compact required adoption and implementation of a regional plan to meet the thresholds as well as other specific requirements of the Compact. These plans and regulations are intended to provide for the orderly growth and development within the Tahoe Basin consistent with the environmental carrying capacity of the area. Included in regional plan requirements are a land use element, transportation element, conservation element, recreation element, and public services and facilities element. In order to meet the implementation and scheduling requirements, the agency has added an implementation element.

Relationship to County Planning

Each of the plans and ordinances described above will affect the growth and development of the Lake Tahoe Basin including those lands within El Dorado County. The broad scope and purpose of the TRPA, as empowered under the Compact, provides the Agency with the planning and land use regulating authority Basin-wide only with respect to items addressed in the Regional Plan (primarily air, water and scenic quality). Within this framework, the County is encouraged to enact local ordinances, rules, regulations, and policies applicable to local needs and conditions which conform to the Regional Plan. The goals, objectives, and policies listed in Volume I provide the framework within which the County should continue its role in land use decision-making within the Tahoe Basin.

Because of the Federal and Bi-State nature of the TRPA Compact, the Regional Plan takes precedence over, yet is additive to, all local and State requirements for any development application. If a local jurisdiction incorporates the applicable portions of the Regional Plan into the General Plan for an area, coupled with modifications to satisfy California planning law regarding protection of the public health, safety and welfare, (the "missing element" of the Regional Plan) local ordinances and permitting authority can be integrated into the Regional Plan. However, until this occurs, all projects must be consistent with both the Regional Plan

and the El Dorado County General Plan and subject to the appropriate level of environmental documentation required by TRPA and the California Environmental Quality Act (CEQA). As an example, a proposal may be consistent with one but not both plans. This would result in denial by that agency. This dual processing will continue to be a valid point of contention for permit applicants.

The TRPA would prefer that local jurisdictions take over the majority of day-to-day permitting (single family dwellings, additions and remodels). This would free up TRPA staff to concentrate on the substantial regional issues of air, water, and scenic quality as well as the provision of recreational opportunities per the requirements of the Compact.

Meyers Community Plan

The Community Plan for Meyers is intended to serve as the comprehensive land use and development plan for the commercially zoned parcels in the area. The Plan establishes goals and objectives, special policies, programs, and strategies for funding and implementation. The Plan distributes 15,000 square feet of commercial floor area to local projects that provide matching resources and upgrade to Plan requirements. It provides an important opportunity to improve the form and function of the commercial neighborhood and helps to achieve environmental thresholds. The Community Plan can also serve as a basis for future commercial floor area alternatives.

The Community Plan contains a new Community Plan Area Statement which replaces the existing TRPA Plan Area Statement 125, Meyers Commercial. It also amends the El Dorado County General Plan and designates land uses within the boundaries of the Community Plan area. The Community Plan will be incorporated into the County's General Plan upon adoption. The Plan is expected to be updated regularly in order to provide a blueprint for the continued prosperity of the community.

Meyers Town Council

To implement and administer the goals, policies, and standards of the Plan, El Dorado County will create and support the Meyers Town Council. The County's Board of Supervisors shall invest the Council with specific review and approval powers in the areas of land use and design review. The Plan recommends that the County establish the Council and appoint its members at the time it adopts the aspects of the Council's duties identified below. In addition, the Council should operate on an informal capacity where possible to influence local actions and decisions affecting the community and the Plan.

1. Procedure. The Council should meet on an as-needed basis when it has business properly before it. El Dorado County Planning Department will provide the primary staff and technical support. TRPA will provide technical support upon request of the Council and/or County. The County's enabling action should specify an operating

budget, membership, duties, and similar matters. The Plan recommends a five-member Council. The two County supervisors representing areas within the Tahoe Basin should each make two appointments. The four appointed persons together should select the fifth person.

2. Duties. The Council should review any land use proposal within the Community Plan area which involves the allocation of additional commercial floor area, additional tourist accommodation units, change in use, transfer of existing or potential development, site plan review by the County, or any exterior modification requiring a permit from either the County or TRPA. The Council should not review activities which are otherwise exempt from TRPA or County review. Its review of proposed projects should determine consistency with all applicable portions of the adopted plan, including its goals, objectives, policies and the community design element. The Council may recommend conditions of project approval to implement specific elements of the Plan. The Council should complete its review and recommendations prior to action by either TRPA or the County.

If necessary, the Council should specify the design competition procedures necessary to distribute the additional commercial floor area provided under the plan. Refer to the Meyers Community Plan for additional information. The Council should consider and make recommendation to the County and TRPA regarding the need for Community Plan amendments.

The Council should make recommendations to the County and TRPA on projects which are not within the plan area but which can reasonably be expected to affect the plan area regardless of their location. It should advise TRPA and the County on matters involving code enforcement of violations of land use and development regulations in the plan area.

Relationship to City of South Lake Tahoe Planning

The City of South Lake Tahoe is wholly within the Tahoe Basin and therefore subject to the Regional Plan and State Planning, Zoning and Developmental Law. The City Council, acting as the Airport Commission, is responsible for the South Lake Tahoe Airport. The City has an adopted General Plan and has identified a sphere of influence.

Relationship to State Planning Activities

Waters of the Tahoe Basin and the Eastern Slope of the Sierra Nevada Range ultimately drain east to the saline lakes of the Great Basin. These waters are under the jurisdiction of the (California) Lahontan Regional Water Quality Control Board. A separate water quality plan exists for the special needs of the basin authorized by the 1972 Porter-Cologne Water Quality Act. This basin plan seeks similar goals and objectives as the TRPA Regional Plan with respect to water quality issues. The plan requires that all sewage be treated in a central facility (no septic systems) and that treated effluent be exported from the Basin. Lahontan acts as a responsible agency for County and City of South Lake Tahoe projects that come under CEQA review.

The California Department of Forestry and Fire Protection maintains an office in South Lake Tahoe. Staff are available to provide guidance regarding forest management activities for government and the public. County adopted State "Fire Safe" rules apply in the Basin, but they sometimes conflict with TRPA rules with respect to driveway widths, fuel reduction, and vegetative removal. Generally, conflicts are resolved at the project review level.

Relationship to Federal Agencies

Public lands managed by the U.S. Department of Agriculture, United States Forest Service comprise nearly 75 percent of the Tahoe Basin. The U.S. Forest Service established the Lake Tahoe Basin Management Unit (LTBMU) in 1973 to protect Lake Tahoe water quality by specially managing the National Forest lands surrounding the lake according to a specific Land and Resource Management Plan. Recreation and resource conservation, versus commodity production, are stressed in the plan. As with State and local governments, LTBMU management plans and activities are reviewed by the TRPA as well as internally and by the public via the National Environmental Policy Act (NEPA). The LTBMU was created from lands within the Basin from three National forests in two States. This arrangement assists coordinated management of these lands. The LTBMU has become known for pioneering techniques in watershed management, fisheries and stream restoration.

The USDA, Soil Conservation Service, provides soil, water, and vegetative management planning services to government and the public through a local Resource Conservation District.

REGIONAL PLANNING FRAMEWORK

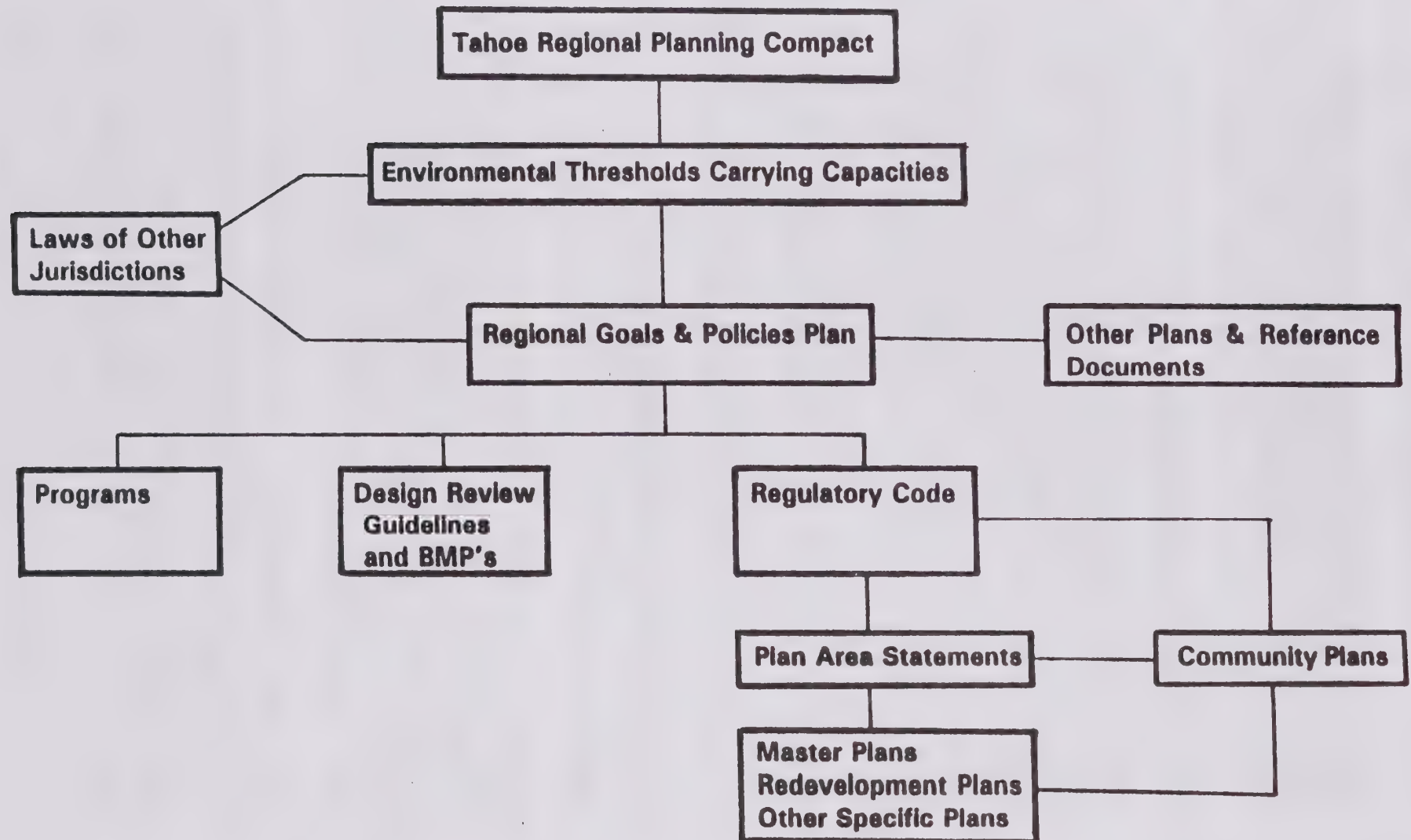
TRPA Regional Plan

The TRPA has now established an integrated Regional Plan which includes the Environmental Threshold Carrying Capacities, the Goals and Policies, the Rules of Procedure, the Code of Ordinances, the Plan Area Statements, Community Plans, Master Plans, Redevelopment Plans, Agency Programs, and Design Review Guidelines. Each of these components of the Regional Plan provide the framework for judging the merits of individual projects and regulating land use within the Tahoe Basin to attain and maintain the environmental thresholds established for the region. The hierarchical relationship of the Plan is shown in Figure 11-1 and explained below.

TRPA Decision Making Process. The 15 member Governing Board, the ultimate TRPA decision making body, is comprised of elected and appointed representatives from the States of California and Nevada, the City of South Lake Tahoe, Carson City, El Dorado, Placer, Washoe, and Douglas counties, and a Presidential appointee. Special rules apply to what constitutes a quorum and project approval based on the location of a project. The Governing Board receives recommendations from the 19 member Advisory Planning Commission (APC) on certain issues.

Figure 11-1

FRAMEWORK OF REGIONAL PLAN



The APC is comprised of technically oriented planning representatives from the local jurisdictions, both State's resources boards, Federal resources agencies, and lay members from the public. Agency staff provides review and presentation of items for consideration based upon the requirements of the Regional Plan. This relationship is detailed in the Rules of Procedure, a component of the Regional Plan.

Consensus Workshop Groups are utilized extensively to develop and resolve particular issues prior to consideration by the decision makers. These groups are comprised of staff from various agencies and regional interest groups.

Environmental Threshold Carrying Capacities. As required by the Compact, the agency adopted environmental thresholds for the region as outlined in Resolution 82-11. This document sets forth standards for water quality, air quality, soils, wildlife, fisheries, vegetation, scenic quality, and recreation. One of the major purposes of a regional plan is to establish regulations and programs to achieve and maintain these thresholds.

Goals and Policies. The central document of the Regional Plan is the Goals and Policies. This document sets forth the basic direction of the Regional Plan to which the other components of the Plan must be consistent. This document identifies the goals (the desired end state or values to be achieved) and the policies necessary to achieve these goals. This document integrates the requirements of the Compact, the thresholds, other plans, and legal requirements, and the public's input. As a result, the Regional Plan provides coordinated and integrated direction for the agency's regulatory code and implementation programs.

Regulatory Codes. The TRPA regulations required to implement the policies set forth in the Goals and Policies are found in the Code of Ordinances and the Rules of Procedure. The Code of Ordinances is divided into more than 100 chapters which govern such issues as region-wide development potential, subdivision prohibitions, transfer of development limitations, land coverage limitations, allocation of development, building and construction standards, and resource protection measures, as well as lot specific issues such as height limits and density allowances.

Plan Area Statements. While the Goals and Policies set forth the policy direction for the region as a whole, Plan Area Statements (PAS) address the policy, regulations, and programs for specific areas. The Land Use Element of the Regional Goals and Policies Plan establishes the basis for developing Plan Area Statements. A policy statement in the element allows the Regional Plan, through Plan Area Statements, to become a specialized, flexible plan that responds to the individual needs of particular neighborhoods, undeveloped areas, or other specific areas. The TRPA Code of Ordinances establishes the authority of the Plan Area Statements to regulate land use within the limitations of the Goals and Policies. Therefore, all projects or activities subject to review under the TRPA Code of Ordinances are also subject to the special policies and regulations of the plan area in which the project or activity is located.

The Plan Area Statements may modify the ordinance standards applicable to its area provided such modifications are permissible within the authority of the Code of Ordinances and consistent with the Regional Plan. Amendment of a PAS is the best way for a jurisdiction to achieve local needs.

Plan Area Statements include parcel specific maps and text that set more specific policy for identified plan areas consistent with the documents above. The Plan Area Statements provide a description of land use for each area, identifying planning issues and establishing specific direction for planning to meet the policy direction of the Goals and Policies. Each statement includes a map of the plan area and regulations that would typically be found within a zoning ordinance. Plan Area Statements exist for 180 separate planning areas within the Tahoe Basin. Within El Dorado County there are 68 separate plan areas, 22 in the City of South Lake Tahoe, 25 in the unincorporated residential/commercial areas, and 21 primarily comprised of U.S. Forest Service and California State Parks jurisdictional lands within the County and City limits. Community plans, master plans, redevelopment plans, and specific plans consistent with the Regional Plan (and State planning law) may be adopted to replace a PAS.

Community Plans. Certain designated commercial plan areas within the region are eligible for community plans as authorized in Chapter 14 of the Code of Ordinances. This is another way for a jurisdiction to amend the Regional Plan to suit local needs. The objectives of the community plan process are to allow consolidation of commercial activities to reduce vehicle miles traveled, to centralize water quality, and streamzone restoration efforts and to revitalize visually blighted areas. Another objective is to provide a receiving area for allocated and transferred commercial floor area and land coverage (see description of these allocation processes below). Incentives include additional land coverage for new (up to 70 percent from 30 percent maximum) and existing commercial uses (up to 50 percent from 30 percent), additional allocation of Commercial Floor Area and Tourist Accommodation Units, and modification of sign and design standards. A community plan is developed by a team comprised of local citizens, TRPA, and local jurisdiction planning staff. Subject to the limitations set forth in the Regional Plan, the community plan may be adopted to replace the Plan Area Statements. Within El Dorado County, the communities of Meyers and Tahoma are designated community plan areas. The Meyers Community Plan was completed in March 1994. The Tahoma Plan Area is shared with Placer County and completion will be a joint effort between the counties, the public, and TRPA.

Master Plans. Ski areas and marinas are subject to the master planning process under Regional Plan requirements. Additional allocations of Persons At One Time and other bonuses are possible with an approved Master Plan. The goal is to provide incentives to update facilities particularly with respect to water and air quality standards.

Design Review Guidelines. These are advisory documents that provide guidance and technical assistance in the development of projects and other activities within the region with respect to visual thresholds.

Other Plans and Reference Documents. This category includes: 1) plans for which the agency has adopted or assumed responsibility, such as the Federal 208 Water Quality Plan, the Federal Air Quality Plan, and the California Regional Transportation Plan; 2) reference documents supporting the Regional Plan and are listed in ordinance 87-8; and 3) the National Forest Land and Resource Management Plan for the Lake Tahoe Basin Management Unit.

Best Management Practices (BMPs). The BMP handbook (Volume II of the Water Quality Management Plan for the Lake Tahoe Region) details the methods to protect water quality during and after project construction. The primary methods employed involve on-site infiltration of runoff to prevent erosion and subsequent deposition of nutrients into the waters of the Lake Tahoe Region, thus attaining established thresholds.

Programs. The programs required to implement the policies set forth in the Goals and Policies are the ongoing monitoring and evaluation programs, the capital improvement programs, and the restoration programs. The agency, with the cooperation of other parties, is required to implement these programs to achieve and maintain the thresholds. Air and water quality mitigation fees from new development and government grant monies are the primary funding sources for these programs

For example, the El Dorado County Department of Transportation is involved in an aggressive Capital Improvement Program funded through grants and mitigation monies. Many miles of poorly designed and built roads have been upgraded with BMPs and runoff channeled into infiltration/ detention basins.

Allocation of Development

Under Chapter 33 of the TRPA Code of Ordinances, the rate and timing of growth in the region is regulated through an allocation of development permits. No project can be constructed or commenced in the Basin unless an allocation is obtained. The TRPA distributes allocations for residential units, commercial floor area, tourist accommodation units, and recreational uses among each of the local jurisdictions within the Basin. These allocations can be distributed by the jurisdictions as they see fit. On-site water quality mitigation is implemented during the permitting process that follows the receipt of an allocation. The allocations applicable to El Dorado County, including the City of South Lake Tahoe, are discussed below.

Residential Allocations. Under the allocation program of the Regional Plan, the distribution of residential dwelling unit allocations in El Dorado County (excluding the City of South Lake Tahoe) have been:

- 1989: 55 units in The South Tahoe Public Utilities District (STPUD) (10 in the Tahoe Truckee Sanitation Agency service area [TTSA])
- 1990 and 1991: 96 units in STPUD (18 in TTSA) per year.

The 1991 threshold evaluation reduced the number of allocations for the next five year period within the STPUD area due to uncertainty of treatment capacity:

- 1992 through 1996: 78 units in STPUD (14 in TTSA) per year (10 percent of these are to be set aside for lots with IPES scores below 726 per TRPA direction).

The City of South Lake Tahoe (CSLT), located entirely within STPUD service area, received 42 allocations in 1989, 60 in both 1990 and 1991. Because of a need to expand opportunities for affordable housing, 50 percent of these allocations were set aside for multi-family housing. The new schedule for 1992-1996 allows 38 total allocations. The City has decided to further distribute the allocations as follows: 24 single family dwellings, ten multi-family dwellings, and four lots with IPES scores less than 726. This represents a reduction in those set aside for multi-family dwellings.

Commercial Floor Area (CFA). The Regional Plan allows a maximum of 400,000 square feet of additional CFA to be permitted from January 1, 1987, to December 31, 1996. The distribution of this floor area to El Dorado County and City of South Lake Tahoe is as follows:

- 10,000 and 65,000 square feet allocated to community plan areas;
- 4,500 and 5,508 square feet allocated to areas in proposed community plan areas prior to adoption of the community plan; and
- 4,500 and 6,620 square feet allocated to areas outside of community plans.

It must be noted that no distinction is made between retail, office, or industrial floor area in the Regional Plan; it is all considered CFA. However, there are allowances for storage units and exemptions from government owned and occupied office space.

Tourist Accommodation Units (TAUs). A maximum of 200 additional TAUs may be approved for construction in the Basin through December 31, 1996. The allocation and distribution of these units is limited to areas with adopted community plans in conjunction with the transfer of existing tourist accommodate development. The TRPA shall allocate the 200 units, as bonus units, to projects in adopted community plans. The Meyers Community Plan will seek to utilize ten TAUs from this total allocation. The CSLT CPs have not yet established numbers for TAUs.

Recreational Uses. Additional recreational uses, as measured by the number of people at one time (PAOTs), is limited to a maximum Basin-wide total of 6,114 PAOTs in overnight facilities, 6,761 PAOTs in summer day use facilities, and 12,400 PAOTs in winter day use facilities. This maximum PAOT capacity is targeted and permitted for development from January 1, 1987, to December 31, 2006. The distribution of these PAOTs is identified in each of the Plan Area Statements. The only recipient of these PAOTs in El Dorado County is the Heavenly Valley ski resort which is currently the subject of an ongoing joint Master Plan/Use Permit process with TRPA, the U.S. Forest Service, and El Dorado County.

Land Capability and Parcel Evaluation

The primary focus of the Regional Plan is to protect water quality. The creation of impervious surfaces and the removal of vegetation creates channeled runoff that causes soil erosion and subsequent deposition of sediment and nutrients into Lake Tahoe. Therefore, the Plan seeks to evaluate the capability of land for development, limit the creation of new land coverage, encourage vegetative growth, and retrofit existing coverage with Best Management Practices whenever a new permit is sought for property development.

Bailey Land Classification System. The report entitled "Land Capability Classifications of the Lake Tahoe Basin" (R.G. Bailey, 1974) is the basis for this rating system. The suitability of land for development based on the inherent limitations of soil/water physical characteristics (depth to groundwater, slope, infiltration rate, percent clay, etc.) of soil types is the key to the system. The 1973 USDA Soil Conservation Service Soil Survey of the Tahoe Basin was utilized as a basis for the resulting maps that established classes (1-7) that corresponded to allowable base land coverage ranging from 1 to 30 percent of total parcel size. Flat ground with deep soils are most suited under this system and the alpine nature of the basin results in limitations for a majority of the land in all but a few areas. This system was used for residential development until Individual Parcel Evaluation System (IPES) was initiated in 1989. The system is still used for calculating allowable coverage on parcels with existing development and on commercial, industrial and other vacant lands larger than one-third acre.

Individual Parcel Evaluation System (IPES). The scale of the soils maps and the level of intensity of the soil survey caused complaints with implementation of the Bailey system. Therefore, in 1989 the TRPA established a procedure for determining the capability each vacant residential property to receive an allocation for construction of single family dwellings on parcels less than one-third acre. This procedure is called the Individual Parcel Evaluation System or IPES. The basis for the procedure is to establish the relative sensitivity of a parcel with respect to water quality impacts created by impervious land coverage (e.g. wet and rocky sites would score low). Only parcels with an IPES score in the "top rank" of all scores will be eligible for an allocation. Currently, the cutoff line is a score of 725 (on a scale of 0 to 1500). Any parcel with a score of 726 or higher is eligible for a residential building permit if the property owners obtain an allocation from the County. Because the potential water quality impacts of construction are a key concern, the factors that comprise the IPES score include: the relative erosion hazard of the site, the runoff potential, access to the building site, the presence of Stream Environment Zones (SEZs), the condition of the watershed, the ability to revegetate the site, the need for water quality improvements in the vicinity of the parcel, and the distance of the parcel from Lake Tahoe. This capability ranking, combined with the installation of "Best Management Practices," should result in the mitigation of water quality impacts of new development to insignificance. As water quality thresholds are attained through capital improvement projects and BMP technology improves, the cutoff line will be lowered to ultimately allow development of a majority of the vacant residential parcels in the basin.

Buyout Programs. In the early 1980s the U.S. Forest Service and the California Tahoe Conservancy, authorized and funded by the U.S. Congress and the State Legislature (and ongoing bond issues) respectively, have initiated buyout programs for low scoring, environmentally sensitive lots. These programs are designed to provide options to property owners and to preclude development on sensitive lots. The result has been an intermixing of public land ownership in small lot subdivisions that provides a feeling of open space and the provision of habitat for plant and animal species. Depending on the sensitivity of a particular neighborhood, this may result in a great deal of open space, or virtually none.

These programs are not without problems. Encroachment onto these parcels by adjacent landowners has been significant including erection of outbuildings, vehicle and boat storage, bridle paths, BMX and ORV courses, and other activities inconsistent with the intent of the buyout programs (no soil disturbance or increase in coverage). The Tahoe Conservancy has a Voluntary Services Management Agreement (or "Adopt a Lot") program that allows adjacent landowners or agencies to provide limited management and use of these lots in return for providing some stewardship for the land. The Tahoe Conservancy also has an active (funded) program to provide management of their properties with respect to fire hazard, erosion control, and debris cleanup. However, Federal fuel management and hazard reduction programs are the subject of current budget reductions. The long-term management of Federal (and to a lesser degree State) buyout lots may pose problems in future years due to increased fuel loading and decreased funding for maintenance.

Several of these properties are used by the El Dorado County Department of Transportation for Capital Improvement Program (erosion control) projects, particularly settling basins and water conveyance facilities. The U.S. Forest Service has indicated concerns regarding liability and maintenance issues on these properties.

There is also a revenue issue because the property is removed from the tax roles and not subject to snow removal, ambulance, landfill, and other per-parcel fees. However, the cost of annual billing and processing may offset the tax revenue received. The U.S. Forest Service properties do contribute to the total acreage of Federal lands subject to in-lieu payments for taxes. This amounts to 25 percent of revenues taken in by the Forest Service. The full impacts of these buyout programs should be analyzed by the County and a policy level decision made to address issues that may be discovered.

TAHOE BASIN ECONOMIC CONDITIONS

The economy of the Tahoe Basin is geared primarily towards servicing the tourist trade. The area's proximity to Lake Tahoe, numerous ski resorts, and the gaming facilities are its primary economic assets. According to a 1989 study (little if any changes have occurred) commissioned by the City of South Lake Tahoe and the County, there are approximately 180,000 square feet of professional office/service space primarily occupied by local-serving finance, insurance and real estate businesses, and businesses related to the tourism industry.

The study also indicated 185,000 square feet of industrial space. It is unlikely, based on demand forecasts and other allocation priorities, that the inventory of industrial space will increase significantly in the future, if at all.

Retail Market

The influx of tourists attracted to the County represents tremendous retail opportunities for the central County market area and the Tahoe Basin market area.

In the Tahoe Basin, recent studies indicate a shortage of both tourist-serving and resident-serving retail space. Allocations (detailed earlier) of future development allow 96,000 square feet of new space in the City (77,120) and El Dorado County (19,000) through 1996. This space will be concentrated in existing commercial nodes, primarily those with approved community plans.

Redevelopment plans in the City of South Lake Tahoe include development of two major projects, one of which is completed and the other under construction. When complete, the projects will add 700 new hotel rooms, convention facilities, and approximately 50,000 square feet of retail commercial. As part of the Plan, CFA will be relocated and existing motel rooms throughout the area will be retired to create an overall net decrease in number of rooms. This also serves to provide open space, water quality treatment areas, wildlife habitat, and view corridors. The strategy is to expand and upgrade the mix of room types, improve competitive positioning in the convention market, generally concentrate development in existing commercial nodes, provide much needed improvements to a blighted area, and help attain Regional Plan thresholds.

Housing Market

South Lake Tahoe is the most unique submarket area in the County because of the seasonal occupancy of many of the residential units and demographics of the permanent residents in the Tahoe area.

Growth in the South Lake Tahoe submarket area has been restricted by environmental constraints as previously described. However, the allocation program creates an artificially controlled supply of housing that may not correspond to market conditions at the time. This may serve to raise and lower prices depending on external economic conditions.

The housing supply in the Tahoe Basin reflects its resort orientation. Major segments of the market include second-home and vacation rentals and housing for employees of the casino and tourist industry. Housing prices range dramatically from lake-front homes in excess of \$1 million to small summer cabins under \$80,000. The average home price sale in the first quarter of 1990 was \$120,000.

REFERENCES

El Dorado County Planning Department, *Meyers Community Plan*.

R.G. Bailey, 1974.

U.S. Department of Agriculture, Soil Conservation Service, *Soil Survey of the Tahoe Basin, California and Nevada*, 1973.

APPENDICES

Appendix A

***THE PROCEDURE FOR EVALUATING
THE SUITABILITY OF LAND
FOR AGRICULTURAL USE***

THE PROCEDURE FOR EVALUATING THE SUITABILITY OF LAND FOR AGRICULTURAL USE

December 8, 1993

The following methodology has been developed as a rational procedure to evaluate lands for agricultural potential and to offer protective policies that will act to preserve these lands for agricultural use. This system is the result of extensive meetings between the El Dorado County Agricultural Commission, the Soil Conservation Service and the County Planning Department staff. This system may be used to analyze any parcel of land in El Dorado County for its potential for agricultural use....

The agricultural potential of parcels will be rated on a scale of 0 to 100 points upon an evaluation of each of these five categories:

1. Soils;
2. Climate;
3. Water;
4. Parcel Size; and
5. Land Use.

Contiguous parcels under a common ownership shall be considered as a single unit. When the parcel or unit is variable in characteristics such as soil type or depth, slopes, climate, etc., it may be evaluated in segments, provided that each segment is 20 acres or larger.

The following criteria may exclude any parcel or land segment from being considered as potential agricultural land:

1. Soil depth less than 18 inches;
2. Elevation greater than 4,000 feet (except for timberlands);
3. Slopes in excess of 30 percent (except timberlands).

In arriving at the points to be awarded for each category, analyze each parcel or segment according to the array of information which is most applicable in the category. The cumulative total of points in all categories will determine the agricultural potential of a parcel or segment based upon major factors considered in this methodology.

Categories I, II, and III are the core of the most important prerequisite for agricultural lands, while Categories IV and V are modifiers based upon parcel size and surrounding land use.

The cumulative total of points in all categories determines the overall suitability of a parcel for agricultural use. By examining each category, then a cumulative point total of 60 points or greater will signify that a parcel has good agricultural capability, and is to be protected as potential agricultural land suitable for agricultural use.

CATEGORY I: SOIL CAPABILITY AND CHARACTERISTICS (40 points possible)

Points	Criteria
40	Assigned to all Class II and III soils located in a site.
30	Assigned to those Class IV, V and VI soils with a minimum depth of 40 inches.
20	Assigned to those Class IV, V and VI soils below 40 inches in depth, but with a minimum depth of 30 inches.
10	Assigned to those Class IV, V and VI soils below 30 inches in depth, but with a minimum depth of 24 inches.
0	Assigned to those Class IV, V and VI soils below 24 inches in depth, but with a minimum depth of 18 inches.
0	Assigned to those classes VII and VIII soils.

NOTE: There are no Class I soils located in El Dorado County.

Parcels with mixed soil classifications or types shall be evaluated on the "Choice Soils" present, provided that "Choice Soils" constitutes 30% or more of the parcel. For those parcels that contain less than 30% "Choice Soils", the parcel shall be evaluated on the dominate soil class or type.

Soils "Capability Classes" are defined on page 38 of the Soils Survey of El Dorado Area, Ca., USDA Soil Conservation Service and Forest Service, April 1974.

The "Guide to Mapping Units", found in the back of Soils Survey of El dorado Area, Ca., USDA Soil Conservation Service and Forest Service, April 1974, shows capability class each soil is in.

CATEGORY II: CLIMATE (25 points possible)

- A. Elevation.** Assign 25 points if elevation at parcel or segment is between 1,500 and 3,000 feet, otherwise assign points as listed on the following table.

NOTE: For timber assign the total of 25 points for this category.

Points	Elevation		Points	Elevation
10	4,000'		24	3,100'
11	3,900'		25	1,500' - 3,000'
12	3,800'		24	1,400'
13	3,700'		21	1,300'
14	3,600'		17	1,200'
16	3,500'		14	1,100'
18	3,400'		12	1,000'
20	3,300'		10	900' or less

CATEGORY III: AGRICULTURAL WATER (15 points possible)

Adequate agricultural water is necessary for the majority of crops in El Dorado County, with most of the existing agricultural areas in the County being served by the EID or GDPUD systems. Some crops in the County can be dry-farmed successfully; established walnut orchards and vineyards are notable examples.

The intent of this category is to assign points to a parcel or segment based upon the criteria of water availability. Lands with agricultural potential and having piped water available allow for a greater range of choices for the type of crop to grow. These same lands having agricultural potential are also suitable for residential use. Due to the very limited extent of agriculturally-suited lands in El Dorado County, it is in the best interest of the residents in this County to utilize existing services where possible to serve these lands, but also to recognize that protection of good agricultural lands not currently served with public water is equally important.

The effect of this category will be to "weight" points to lands currently served by public water, where active protection by the County is most often required to reserve the good agricultural lands from being converted to primarily residential uses.

NOTE: For lands that are to be utilized for timber assign 15 points for Category III.

Points	Criteria
15	Parcel or segment has existing water supplied by a public entity or existing on-site water systems.
10	a) Parcel or segment is within the EID or GDPUD District; is not currently supplied by these entities but is adjacent to and has a reasonable and realistic potential to be served, or b) Parcel or segment has a reasonable and realistic potential to develop an adequate on-site agricultural water system, most commonly in the form of deep wells or reservoirs.
5	Parcel or segment is not within the EID or GDPUD Districts and is not currently served by a public agency, but is within the LAFCO "Sphere of Influence" and has a reasonable potential to annex.
0	Parcel or segment is not within the EID or GDPUD Districts, is not within the LAFCO "Sphere of Influence," does not have a reasonable potential to annex and no reasonable potential to develop well water as determined by surrounding well reports or on site drilling to at least a 300 foot depth.

CATEGORY IV: PARCEL SIZE (10 points possible)

Assign points according to size of parcel being evaluated.

Points	Parcel Size
10	20 to 100+ acres
7	10 to 19.99 acres
5	5 to 9.99 acres
1	1 to 4.99 acres

CATEGORY V: SURROUNDING LAND USE (10 points possible)

Points	Surrounding Land Use
10	Parcel is located within an established and recognized agricultural area (Agricultural District)
7	Parcel is located in an area having good crop potential but not yet intensively planted. Urbanization on adjacent parcels is slight to moderate.
5	Parcel is located in an area of good crop potential, but about half of the surrounding parcels are urbanized (less than 5 acres in size).
2	Parcel is located within an existing community.

A cumulative score of 60 points or more in all 5 categories signifies that a parcel or segment has a good agricultural capability.

Revised and approved by the Agriculture Commission as of December 8, 1993

Appendix B

HISTORIC PLANNING DOCUMENTS

Appendix B

HISTORIC PLANNING DOCUMENTS

Prepared/Approved

Circulation Element	1963
Long Range Plan Diagram	1969
Open Space/Conservation Element	1973
American Flat/Spanish Flat/Bear Creek Plan	1975
Greenwood Area Plan	1976
Gold Hill Area Plan	1976
Rescue Area Plan	1976
Noise Element	1976
Shingle Springs Area Plan	1977
Seismic Safety/Safety Element	1977
Recreation Plan	1978
Pleasant Valley/Oak Hill/Sly Park Area Plan	1978
Garden Valley Area Plan	1979
Georgetown Area Plan	1979
Diamond Springs/El Dorado Area Plan	1979
Kelsey Area Plan	1979
Bikeways Master Plan	1979
Barnett Ranch Area Plan	1980
Cameron Park Area Plan	1981
Long Range Land Use Plan	1981
Latrobe Area Plan	1981
Lotus/Coloma Area Plan	1981
El Dorado Regional Transportation Plan	1982
American River Canyon Area Plan	1982
Cool/Pilot Hill Area Plan	1982
Placerville Periphery Area Plan	1982
Somerset/Fairplay/Mt. Aukum Area Plan	1982
El Dorado Hills/Salmon Falls Area Plan	1983
Pollock Pines Area Plan	1983
Housing Element	1984
Scenic Highways Element	1984
Camino/Fruitridge Area Plan	1985
Greenstone Area Plan	1985
Cameron Airpark Airport Comprehensive Land Use Plan	1986
Placerville Airport Comprehensive Land Use Plan	1987
Georgetown Airport Comprehensive Land Use Plan	1987
Northwest El Dorado Hills Specific Plan	1987
El Dorado Hills Specific Plan	1987
Hazardous Waste Management Plan	1989
Hiking and Equestrian Trails Master Plan	1990
Housing Element	1992

Appendix C

AFFORDABLE HOUSING TASK FORCE

Appendix C

AFFORDABLE HOUSING TASK FORCE

Vern Sayles, Task Force Chairman, Association of Realtors

Phil Almquest, Building Inspection Services

Janna Genovese, SLT Women's Center

Vaughn Hintze, Sierra Land Design

Patricia Inman, The Mansour Company

Gary Jenkins, Fox & Carskadon Realty

Dorine Kelly, El Dorado Irrigation District

Jim Liles, Liles Realty

John Litwinovich, Senior Family Services

Thomas Meuser, El Dorado Savings Bank

Duval Phillips, Western Sierra National Bank

Robert Semple, City of Placerville

Mary Struhs, Women's Center

William Vandegrift, Placer Title Company

Jim Wiltshire, ACW Affordable Home Loans

Jerry Reynolds, El Dorado County Administrators Office

Appendix D

***REGIONAL HOUSING ALLOCATION PLAN
FOR SIERRA PLANNING ORGANIZATION***

SIERRA PLANNING ORGANIZATION

A JPA CONSISTING OF THE COUNTIES OF
EL DORADO, NEVADA, PLACER & SIERRA

REGIONAL HOUSING ALLOCATION PLAN FOR SIERRA PLANNING ORGANIZATION

Prepared by
Barbara Hollatz
Executive Director

APRIL 1991

ADOPTED OCTOBER 2, 1991

AMENDMENT ADOPTED DECEMBER 4, 1991

Court View Plaza

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- 2 - 1997 HOUSING GOALS
- 3 - GROWTH PROJECTIONS 1990 - 2000
- 4 - HOUSEHOLD INCOME PROJECTIONS
1980 - 1990
- 5 - PERSONS CONTACTED
- 6 - GOVERNMENT CODE SECTION 65584
- 7 - EXCERPTS FROM "DEVELOPING A REGIONAL
NEEDS PLAN", HOUSING AND COMMUNITY
DEVELOPMENT, JULY 1988

INTRODUCTION

Government Code Section 65584 mandates councils of government to prepare and periodically update regional housing allocation plans. This plan is intended to meet this requirement.

The previous plan was completed in 1984 by the Sierra Planning Organization (SPO) and projected housing needs through 1990. This plan will covers the period July 1990 through July 1, 1997.

AREA PROFILE

The Sierra Planning Organization (SPO) jurisdiction covers a four county area composed of portions of Placer and El Dorado Counties, and the entire counties of Nevada and Sierra. The cities covered by this plan are Auburn, Colfax, Loomis (Placer County); Grass Valley, Nevada City (Nevada County); Loyalton (Sierra County); and Placerville (El Dorado County). The Placer County cities of Roseville, Rocklin and Lincoln are the responsibility of the Sacramento Regional Council of Governments (SACOG). The city of South Lake Tahoe in El Dorado County is covered by the Tahoe Regional Planning Agency (TRPA).

The housing allocations are prepared for areas called "housing market areas". In some cases, a single jurisdiction is treated as a housing market area in this plan; in other cases, several jurisdictions are grouped together to form a "general housing market area" (GHMA). The California Department of Housing and Community Development (HCD) defines a GHMA as a area which shows significant economic interrelationship and substantial commute levels between jurisdictions. Within the SPO area, two GHMA's are designated in this plan:

1. Western Placer County and Nevada County (designated as Western Placer/Western Nevada GHMA)
2. Western El Dorado County (called Western El Dorado GHMA)

The western Placer/Western Nevada GHMA consists of the western portion of Placer County indicated on the map and Census Tracts 1 - 10 in Nevada County. The Western El Dorado GHMA consists of the west slope of the county corresponding to Census Tracts 306-315.

In all the remaining areas, each housing market area consists of a single jurisdiction as follows:

1. Sierra County Unincorporated;
2. City of Loyalton;

3. Eastern Nevada County (unincorporated eastern slope corresponding to Census Tracts 11 & 12);
4. Eastern Placer County (unincorporated area east of the City of Colfax as shown by the dotted line on the map).

The Tahoe Basin portions of El Dorado and Placer Counties and the cities of Roseville, Lincoln and Rocklin are excluded from this plan. The Sacramento Area Councils of Government (SACOG) and the Tahoe Regional Planning Agency (TRPA) are responsible for the housing allocations in the two areas.

PURPOSE

The purpose of the legislation requiring this plan was to determine housing needs for people at all income levels. The projections of housing needs in the plan are intended to be goals or targets for each jurisdiction.

Preparation of this plan was based on 1990 Census (population only) data. There is no Census data available at this time on income levels. Under the most desirable circumstances the distribution of housing units by income levels is difficult. Recent market pressures plus local building fees appear to be dictating housing costs and in a free market this does not necessarily provide housing for all income levels. SPO has projected income levels using the 1980 Census information as a basis. However, the intent of the housing allocation plan is to provide an ideal target for jurisdictions to try to attain. With this major goal in mind, the following assumptions were considered in preparing this plan.

Assumption

The following set of assumptions underlie this plan and its rural context.

1. The levels of household growth and construction need contained in this plan may be considered to be minimum growth needs. Nothing in this plan should mean that a local government may not plan for more households. Due to the rural nature of most of the foothill counties, the services required to provide urban housing densities are not readily available in the unincorporated areas. Most of the long-term planning performed in the SPO region is based upon a premise that growth should be directed to incorporated cities or county areas where suitable infrastructure is available.

2. It is assumed that economic characteristics of each housing market area will not change significantly during this planning period. Consequently, it is assumed that the income group characteristics of each housing market will be approximately the same in 1997 as in 1990.

3. No growth control measures are in effect within the SPO boundaries. The drought conditions occurring throughout the state have affected water supplies in some counties causing a temporary moratorium on water hook-ups for new construction. Normally, the lack of infrastructure are the limiting factor in providing housing.

4. Some 1980 Census data was used for the plan and although it might not be valid in 1990, the required submittal date of the plan precludes using 1990 Census figures which will not be available until sometime in 1991-93.

5. Under this plan, geography is assumed to remain constant. The town of Loomis was incorporated in 1984 and is shown in the plan. While other areas might be studying the validity of incorporating, if inhabited annexations or incorporations occur, the affected jurisdiction should revise their allocations accordingly.

6. Anticipated employment increases in areas such as South Placer and Grass Valley are included in population projections.

7. The household sizes should be a stable factor through the time frame of this plan.

8. The private sector will provide most additional housing needed. The deficit occurring in the federal budget and reductions in housing programs will probably continue throughout the time frame of the plan. As stated, these figures are goals for the SPO jurisdictions to aim for in providing for housing needs at all income levels.

REGIONAL HOUSING NEEDS ALLOCATION

The primary objective of the plan is to provide housing for all income segments of the SPO jurisdiction. The figures provided will in turn be used by jurisdictions within SPO to address regional housing needs in the 1992 revision of their respective Housing Elements.

The following tables indicate the current breakdown of 1990 income groups into households, the 1997 allocations and the net change between the two.

The method utilized to arrive at these figures is contained in the appendix. Basically, income group percentages, based on city and county averages, were applied to straight line projections of households.

Minor Factors in Regional Housing Needs Analysis

Seven items are to be discussed by the regional housing plans. Six of the seven items are briefly discussed here. The seventh, housing needs by persons of all income levels, is the primary objective of this plan and is addressed throughout the plan. The six items are discussed only briefly in this document due to the rural nature of the counties and the general housing market. The counties also will be expanding these areas of discussion in the mandated July 1992 Housing Element Revision.

Knowledge of availability of suitable housing sites and public facilities inventories is a local government function. All that will be mentioned here is that there are adequate sites available in the general housing market. Public services are the limiting factor to housing expansion in rural areas. The local Housing Element revisions prepared by cities and counties in July 1992 will contain a detailed discussion of this area.

Market demand for housing includes the need for an adequate supply of housing to provide housing for households in each income group as well as an adequate supply of vacant units to provide a healthy housing market. Vacancy rates are an indicator of whether there are shortages of housing or not. As of January 1, 1990 total vacancy rates were high in all of the counties in the SPO area (El Dorado 21.70%, Nevada, 14.39%, Placer 18.36% and Sierra 31.98%). These figures indicate that all of these counties have many "second homes", reflecting the recreational orientation of major portions of each county. The allocation in this plan is households. Households are occupied housing units. Occupied housing units plus vacant units equals the total housing stock. In planning for an adequate supply of housing, including sufficient units which are vacant for sale or rent, each local government should consider the role which second homes play in the local market area. In planning for growth, sufficient sites need to be provided for the increase in the number of households, sufficient units which are vacant for sale or rent, and the anticipated level of second homes and other vacant units which are not available for residential use.

Employment opportunities in the general housing market area are based upon a commute pattern that leads to the Sacramento MSA and the Roseville area. The counties are "bedroom communities" to the more urban areas in Sacramento County and Roseville. South Placer County continues to expand its job market and this trend should exist throughout this plan providing the economy remains reasonably strong.

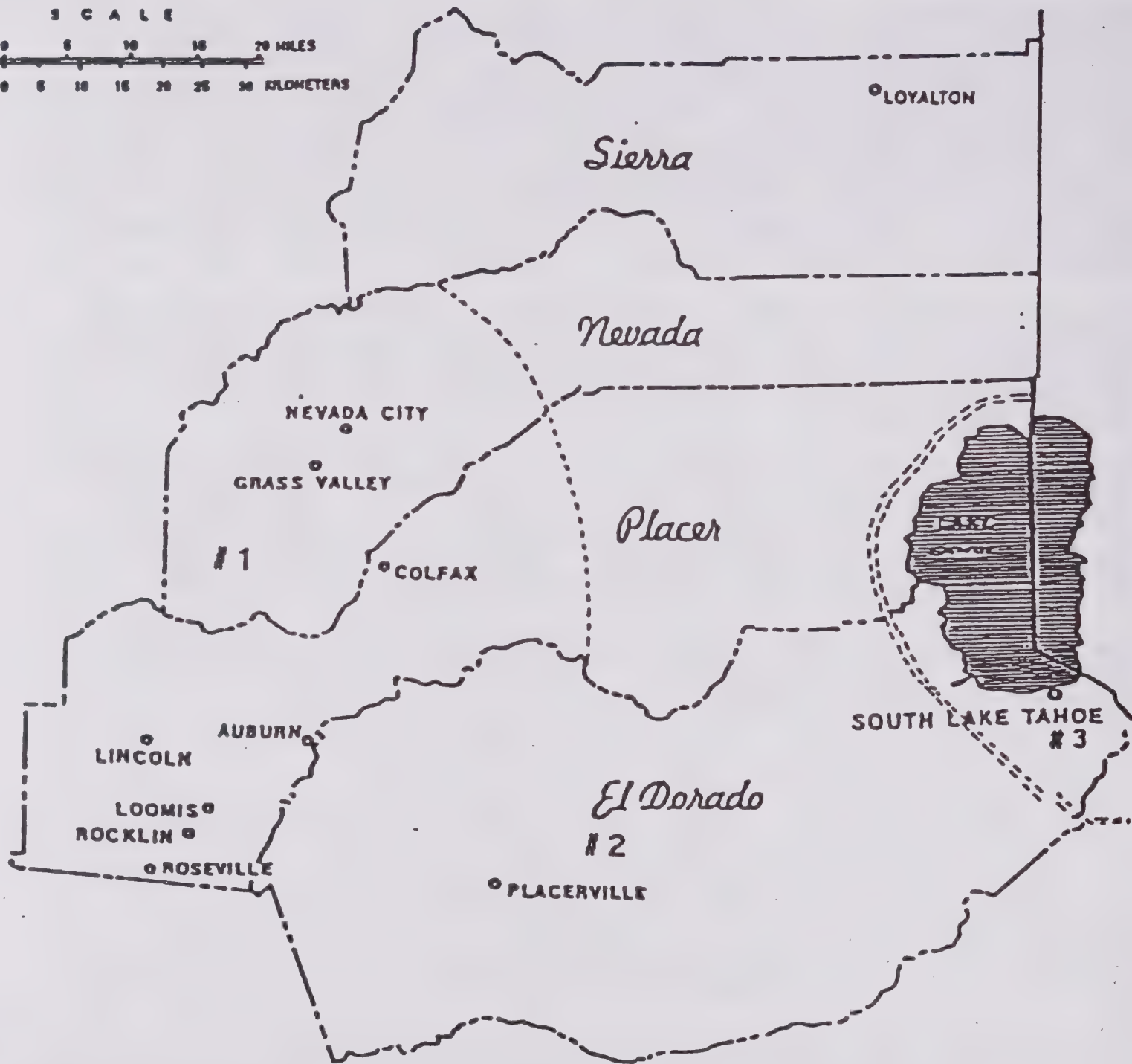
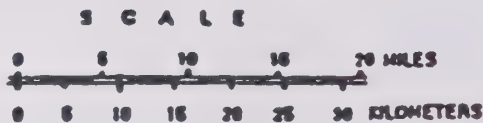
Type and tenure of housing is an area that the local Housing Element will include. An extensive housing inventory at the regional level is not feasible for rural areas. Information describing the type and tenure of housing will be available from the 1990 Census which should be published by 1993.

Commute Patterns - One fact that should be recognized, in the foothill counties covered by SPO, is that many workers commute to their jobs. Direct patterns are only discernible within and outside the counties based on census data which currently is 10 years old. Placer County and El Dorado County are both included in the Sacramento Metropolitan Statistical Area (SMSA) and have more detailed destination-origin-employment data. Based upon the rural nature of the area, the majority of the commuting is done intra-regionally, i.e. El Dorado County to Roseville, Auburn to Roseville, Grass Valley to Auburn, Folsom to Roseville, etc., making direct patterns difficult to define.

The commute table has been updated based on population projections and assumes that the patterns valid in the 1980 Census are continuing. This fact can be verified when the 1990 Census is published but traffic patterns and highway congestion appear to support this theory.

Housing Needs for Farmworkers - The general housing market area contains an insignificant number of farmworkers to justify a specific housing needs program. Estimates from the Employment Development Department are that less than 100 seasonal farmworkers work in any of the four counties. The premise is that most of these workers are county residents and not transient workers.

Impaction Policy - The SPO policy, in dealing with impacted income groups, is to assist local jurisdictions to implement housing programs to relieve impacted areas.



SIERRA PLANNING ORGANIZATION - Four County Region

- # 1. Western Placer/Nevada General Housing Market
(Excluding Roseville, Lincoln and Rocklin which are in SACOG)
- # 2. Western El Dorado General Housing Market
- # 3. Lake Tahoe Basin - Covered by Tahoe Regional Planning Agency



TABLE A

SIERRA PLANNING ORGANIZATION

EL DORADO COUNTY

1990 HOUSEHOLDS BY INCOME GROUP*

	<u>VERY LOW</u>	<u>OTHER LOW</u>	<u>MODERATE</u>	<u>ABOVE MOD.</u>	<u>TOTAL</u>
Acerville	1,018	679	815	882	3,394
South Lake Tahoe**	1,984	1,811	2,070	2,760	8,625
Remainder of County	<u>7,313</u>	<u>5,920</u>	<u>7,906</u>	<u>13,687</u>	<u>34,826</u>
TOTAL	10,315	8,410	10,791	17,329	46,845

1997 FAIR SHARE HOUSEHOLD PROJECTIONS

	<u>VERY LOW</u>	<u>OTHER LOW</u>	<u>MODERATE</u>	<u>ABOVE MOD.</u>	<u>TOTAL</u>
Planned Housing Goals	22%	18%	23%	37%	100%
Acerville	1,018	690	881	1,417	4,006
South Lake Tahoe**	2,041	1,864	2,130	2,840	8,875
Remainder of County	<u>11,250</u>	<u>9,154</u>	<u>11,949</u>	<u>19,809</u>	<u>52,161</u>
TOTAL	14,309	11,708	14,960	24,066	65,042

ASSUMPTION:

Average 4.8% annual county growth rate

1990 - 1997 FAIR SHARE NEEDS ALLOCATION

	<u>VERY LOW</u>	<u>OTHER LOW</u>	<u>MODERATE</u>	<u>ABOVE MOD.</u>	<u>TOTAL</u>
Acerville	0	11	66	535	612
South Lake Tahoe**	57	53	60	80	250
Remainder of County	<u>3,937</u>	<u>3,234</u>	<u>4,043</u>	<u>6,122</u>	<u>17,335</u>
TOTAL	3,994	3,298	4,169	6,737	18,197

Source: Housing and Community Development, "Household Projections by Income Group" (From final 1990 U.S. Census Household totals)

South Lake Tahoe Housing is allocated and regulated by the Tahoe Regional Planning Agency

TABLE B

SIERRA PLANNING ORGANIZATION

NEVADA COUNTY

1990 HOUSEHOLDS BY INCOME GROUP*

	<u>VERY LOW</u>	<u>OTHER LOW</u>	<u>MODERATE</u>	<u>ABOVE MOD.</u>	<u>TOTAL</u>
Grass Valley	1,618	705	871	954	4,148
Nevada City	496	187	219	387	1,289
Balance of County	<u>5,875</u>	<u>3,418</u>	<u>5,368</u>	<u>10,660</u>	<u>25,321</u>
TOTAL	7,989	4,310	6,458	12,001	30,758

1997 FAIR SHARE HOUSEHOLD PROJECTIONS

	<u>VERY LOW</u>	<u>OTHER LOW</u>	<u>MODERATE</u>	<u>ABOVE MOD.</u>	<u>TOTAL</u>
HCD Housing Goals	26%	14%	21%	39%	100%
Grass Valley	1,618	736	1,004	1,902	5,260
Nevada City	496	203	261	488	1,448
Balance of County	<u>8,696</u>	<u>4,882</u>	<u>7,466</u>	<u>13,825</u>	<u>34,870</u>
TOTAL	10,810	5,821	8,731	16,215	41,578

ASSUMPTION: Average annual county growth rate of 4.4%

1990 - 1997 FAIR SHARE NEEDS ALLOCATION

	<u>VERY LOW</u>	<u>OTHER LOW</u>	<u>MODERATE</u>	<u>ABOVE MOD.</u>	<u>TOTAL</u>
Grass Valley	0	31	133	948	1,112
Nevada City	0	16	42	101	159
Balance of County	<u>2,821</u>	<u>1,464</u>	<u>2,098</u>	<u>3,165</u>	<u>9,549</u>
TOTAL	2,821	1,511	2,273	4,214	10,820

* Source: Housing and Community Development, "Household Projections by Income Group" (From final 1990 U.S. Census Household totals)

* South Lake Tahoe Housing is allocated and regulated by the Tahoe Regional Planning Agency

TABLE C

SIERRA PLANNING ORGANIZATION

PLACER COUNTY

(Part*)

1990 HOUSEHOLDS BY INCOME GROUP**

	<u>VERY LOW</u>	<u>OTHER LOW</u>	<u>MODERATE</u>	<u>ABOVE MOD.</u>	<u>TOTAL</u>
uburn	1,373	778	916	1,511	4,578
ax	263	120	87	77	547
amis	393	275	412	884	1,964
ance of County	<u>5,950</u>	<u>5,272</u>	<u>6,538</u>	<u>13,071</u>	<u>30,829</u>
AL	7,979	6,445	7,951	15,543	37,918

1997 FAIR SHARE HOUSEHOLD PROJECTIONS

	<u>VERY LOW</u>	<u>OTHER LOW</u>	<u>MODERATE</u>	<u>ABOVE MOD.</u>	<u>TOTAL</u>
Housing Goals	21%	17%	21%	41%	100%
burn	1,373	830	1,044	2,107	5,354
ax	263	120	97	158	638
nis	483	391	483	943	2,300
ance of County	<u>7,184</u>	<u>6,190</u>	<u>7,679</u>	<u>14,955</u>	<u>36,007</u>
AL	9,303	7,531	9,303	18,163	44,299

ASSUMPTION:

Average annual part of county growth rate of 2.19%

1990 - 1997 FAIR SHARE NEEDS ALLOCATION

	<u>VERY LOW</u>	<u>OTHER LOW</u>	<u>MODERATE</u>	<u>ABOVE MOD.</u>	<u>TOTAL</u>
urn	0	52	128	596	776
ax	0	0	10	81	91
nis	90	116	71	59	336
ance of County	<u>1,234</u>	<u>918</u>	<u>1,143</u>	<u>1,884</u>	<u>5,178</u>
AL	1,324	1,086	1,352	2,620	6,381

Lincoln, Rocklin and Roseville covered by SACOG Regional Allocation.

Source: Housing and Community Development, "Household Projections by Income Group" (From final 1990 U.S. Census Household totals)

TABLE D

SIERRA PLANNING ORGANIZATION

SIERRA COUNTY

1990 HOUSEHOLDS BY INCOME GROUP*

	<u>VERY LOW</u>	<u>OTHER LOW</u>	<u>MODERATE</u>	<u>ABOVE MOD.</u>	<u>TOTAL</u>
Loyalton	100	38	65	159	362
Balance of County	371	139	245	357	1,112
TOTAL	471	177	310	516	1,474

1997 FAIR SHARE HOUSEHOLD PROJECTIONS

	<u>VERY LOW</u>	<u>OTHER LOW</u>	<u>MODERATE</u>	<u>ABOVE MOD.</u>	<u>TOTAL</u>
HCD Housing Goals	32%	12%	21%	35%	100%
Loyalton	108	41	71	173	393
Balance of County	399	149	261	382	1,191
TOTAL	507	190	332	555	1,584

ASSUMPTION:

Average annual county growth rate of 1.0%

1990 - 1997 FAIR SHARE NEEDS ALLOCATION

	<u>VERY LOW</u>	<u>OTHER LOW</u>	<u>MODERATE</u>	<u>ABOVE MOD.</u>	<u>TOTAL</u>
Loyalton	8	3	6	14	31
Balance of County	28	10	16	25	79
TOTAL	36	13	22	39	110

* Source: Department of Finance "Population and Housing Estimates" for January 1990; Income Group Estimates based on 1980 Census

TABLE E
EMPLOYMENT COMMUTE PATTERNS

EL DORADO COUNTY

	<u>1980*</u>		<u>1989**</u>	
Employed in Own County	20,595	48.7%	29,000	44.1%
Employed Outside County	7,143	16.9%	19,425	29.6%
Employed Outside State	5,043	11.9%	6,000	9.1%
Unemployed	3,999	9.5%	2,800	4.3%
Unknown	<u>5,530</u>	13.1%	<u>8,475</u>	12.9%
TOTAL LABOR FORCE	42,310		65,700	

NEVADA COUNTY

Employed in Own County	12,476	57.4%	19,560	60.0%
Employed Outside County	2,790	12.8%	4,560	14.0%
Employed Outside State	572	2.6%	975	3.0%
Unemployed	2,076	9.5%	1,800	5.5%
Unknown	<u>3,832</u>	17.6%	<u>5,705</u>	17.5%
TOTAL LABOR FORCE	21,746		32,600	

PLACER COUNTY

Employed in Own County	26,636	49.3%	42,500	53.7%
Employed Outside County	15,374	28.5%	22,620	28.6%
Employed Outside State	1,079	2.0%	1,580	2.0%
Unemployed	4,867	9.0%	3,600	4.5%
Unknown	<u>6,055</u>	11.2%	<u>8,900</u>	11.2%
TOTAL LABOR FORCE	54,011		79,200	

SIERRA COUNTY

Employed in Own County	752	52.6%	915	53.0%
Employed Outside County	78	5.5%	125	7.2%
Employed Outside State	119	8.3%	175	10.1%
Unemployed	168	11.8%	160	9.3%
Unknown	<u>312</u>	21.8%	<u>350</u>	20.3%
TOTAL LABOR FORCE	1,429		1,725	

* Information Taken From 1980 Census Data

** SEDD Estimates Based on 1980 Census and EDD Labor Force Statistics

Sub-Appendices

to

Appendix D

APPENDIX 1

REGIONAL HOUSING NEEDS ALLOCATIONS

METHODOLOGY

Limitations

The methodologies used by Sierra Planning Organization (SPO) for preparing the housing needs allocation were derived from several sources. The California Department of Housing and Community Development (HCD), the California Department of Finance (DOF), the 1990 U.S. Census, the 1980 U.S. Census and SPO projections were the basis for the allocation. Admittedly, portions of the data base are ten years old and there are no reliable sources for income data needed to update the 1980 Census distribution of income levels. Data from the 1990 Census will not be available until 1993.

Data Used

The following data was used to prepare the allocation:

1. HCD Household Projections by Income Group January 1, 1990, to July 1, 1997
2. 1990 U.S. Census Report C90-PL-1 on Total Population and Total Housing Units
3. SPO Growth Projections for 1990 to 2000
4. SPO Household Income Projections 1980 - 1990

Household Projections

Household estimates for 1990 and projections to 2000 are shown in Appendix 3. The 1990 figures are from the 1990 Census. The projections to 2000 are computations developed by SPO reflecting historical growth trends occurring in the region.

Housing Income Allocations

Household projections by income groups supplied by HCD and the percentage of past household growth were used to produce the allocations for each jurisdiction. It became apparent in reviewing the 1984 allocations that some jurisdictions' allocations for the four income groups needed adjusting thus there are some negative numbers.

Updating Housing Needs Table

The following example was extracted from the California HCD Manual:

The Housing Elements in process by most of the jurisdictions in SPO should consider the economic group served by the new units constructed from 1984 to 1990. The Planning Department can document low-income units developed or in the process of development and could thus reduce the low-income allocations in this document. Otherwise, the minimum low-income housing needs estimates in this document should be the target number. The following illustration shows the update process for City A. The example assumes that the base data of the Regional Housing Needs Plan (RHPA) is January 1, 1990 and City A is adopting its housing element revision subsequent to July 1992.

The following table illustrates the methodology involved in determining the revised basic new construction need by income levels for City A:

City A

Update New Construction Need 1990 to 1997

- #1: Determine net housing units added in 1990
 - 18,800 Housing units on Jan. 1, 1990
 - 18,400 Housing units on Jan. 1, 1989
 - 400 Decrease in New Construction Need

#2: Determine types of housing units added 1989 -1990

<u>New Units</u>	<u>Income Group</u>
204 single-family	Moderate or above moderate
40 multiplex	Moderate
20 mobile homes	Low-income households
136 multifamily	27 very low income
	27 other low income
	82 moderate income

#3: Determine New Construction 1990 to 1997 by Income Group

<u>Income Group</u>	<u>1990-1997 New Construction %</u>	<u>Units</u>	<u>Units Added 1989-1990</u>	<u>Revised New Construction 1990-1997</u>
Very Low	(20)	400	27	373
Other Low	(10)	200	27	173
Moderate	(40)	800	82	718
Above Moderate	(30)	600	69	531
	(100)	2,000	205	1,795

Each jurisdiction has the responsibility to accommodate the revised housing need by income group. They fulfill this responsibility by providing adequate sites zoned for multi-family rental housing, single-family housing, and mobile homes to satisfy all income levels. If a local jurisdiction does not have sufficient suitable sites to accommodate these needs, steps should be taken to change land use, annexation, upzoning or a second unit ordinance would be appropriate.

APPENDIX 2

1997 HOUSING GOALS*

<u>COUNTY</u>	<u>VERY LOW</u>	<u>OTHER LOW</u>	<u>MODERATE</u>	<u>ABOVE MOD</u>
El Dorado	22%	18%	23%	37%
Nevada	26%	14%	21%	39%
Placer	21%	17%	21%	41%
Sierra	32%	12%	21%	35%

* Determined by California State Housing and Community Development
(Based on 1980 Census and mandates from HUD)

APPENDIX 3

GROWTH PROJECTIONS *

EL DORADO COUNTY

Placerville		S. Lake Tahoe		Unincorporated		Total	
1990	8,355	1990	21,586	1990	96,054	1990	125,995
1991	8,556	1991	21,672	1991	102,201	1991	131,791
1992	8,761	1992	21,759	1992	108,742	1992	137,853
1993	8,971	1993	21,846	1993	115,702	1993	144,194
1994	9,186	1994	21,933	1994	123,107	1994	150,827
1995	9,407	1995	22,021	1995	130,986	1995	157,765
1996	9,633	1996	22,109	1996	139,369	1996	165,023
1997	9,864	1997	22,198	1997	148,288	1997	172,614
1998	10,101	1998	22,287	1998	157,779	1998	180,554
1999	10,343	1999	22,376	1999	167,877	1999	188,859
2000	10,591	2000	22,465	2000	178,621	2000	197,547

NEVADA COUNTY

Grass Valley		Nevada City		Unincorporated		Total	
1990	9,048	1990	2,855	1990	66,607	1990	78,510
1991	9,365	1991	2,904	1991	70,337	1991	82,436
1992	9,692	1992	2,953	1992	74,276	1992	86,557
1993	10,032	1993	3,003	1993	78,435	1993	90,885
1994	10,383	1994	3,054	1994	82,828	1994	95,429
1995	10,746	1995	3,106	1995	87,466	1995	100,201
1996	11,122	1996	3,159	1996	92,364	1996	105,211
1997	11,512	1997	3,213	1997	97,537	1997	110,471
1998	11,914	1998	3,267	1998	102,999	1998	115,995
1999	12,331	1999	3,323	1999	108,766	1999	121,795
2000	12,763	2000	3,379	2000	114,857	2000	127,885

SIERRA COUNTY

Loyalton		Unincorporated		Total	
1990	931	1990	2,387	1990	3,318
1991	940	1991	2,413	1991	3,368
1992	950	1992	2,440	1992	3,418
1993	959	1993	2,467	1993	3,470
1994	969	1994	2,494	1994	3,522
1995	978	1995	2,521	1995	3,574
1996	988	1996	2,549	1996	3,628
1997	998	1997	2,577	1997	3,682
1998	1,008	1998	2,605	1998	3,738
1999	1,018	1999	2,634	1999	3,794
2000	1,028	2000	2,663	2000	3,851

* SPO Projections based on 1990 U.S. Census

APPENDIX 3

GROWTH PROJECTIONS •

(CONT.)

PLACER COUNTY

Auburn		Colfax		Loomis		Unincorporated		Total
1990	10,592	1990	1,306	1990	5,705	1990	84,119	1990 101,802
1991	11,016	1991	1,349	1991	5,791	1991	85,381	1991 105,670
1992	11,456	1992	1,394	1992	5,877	1992	86,661	1992 109,686
1993	11,915	1993	1,440	1993	5,966	1993	87,961	1993 113,854
1994	12,391	1994	1,487	1994	6,055	1994	89,281	1994 118,180
1995	12,887	1995	1,536	1995	6,146	1995	90,620	1995 122,671
1996	13,402	1996	1,587	1996	6,238	1996	91,979	1996 127,333
1997	13,938	1997	1,639	1997	6,332	1997	93,359	1997 132,171
1998	14,496	1998	1,693	1998	6,427	1998	94,759	1998 137,194
1999	15,076	1999	1,749	1999	6,523	1999	96,181	1999 142,407
2000	15,679	2000	1,807	2000	6,621	2000	97,624	2000 147,819

• SPO Projections based on 1990 U.S. Census

APPENDIX 4

HOUSEHOLD INCOME PROJECTIONS

1980 - 1990

	<u>1980 [1]</u>	<u>1990 [2]</u>
<u>EL DORADO CO.</u>		
Very Low	\$0 - 11,540	\$0 - 18,750
Other Low	\$11,541 - 18,125	\$18,751 - 30,000
Moderate	\$18,126 - 22,485	\$30,001 - 45,000
Above Moderate	\$22,486 -	\$45,001 -
<u>NEVADA CO.</u>		
Very Low	\$0 - 14,860	\$0 - 17,150
Other Low	\$14,861 - 18,565	\$17,151 - 27,440
Moderate	\$18,566 - 22,785	\$27,441 - 41,160
Above Moderate	\$22,786 -	\$41,161 -
<u>PLACER CO.</u>		
Very Low	\$0 - 11,260	\$0 - 18,750
Other Low	\$11,261 - 16,580	\$18,751 - 30,000
Moderate	\$16,581 - 22,600	\$30,001 - 45,000
Above Moderate	\$22,601 -	\$45,001 -
<u>SIERRA CO.</u>		
Very Low	\$0 - 8,489	\$0 - 16,600
Other Low	\$8,490 - 13,499	\$16,601 - 26,560
Moderate	\$13,500 - 18,899	\$26,561 - 39,840
Above Moderate	\$18,900 -	\$39,841 -

[1] SOURCE - 1980 CENSUS
[2] SPO PROJECTIONS

APPENDIX 5

PERSONS CONTACTED

Larry Walrod, El Dorado County Planning Department
Pat Norman, Nevada County Planning Department
Fred Yeager, Placer County Planning Department
Tim Beals, Sierra County Planning Department
Cindy Schaer, City of Auburn
William Enoch, City of Colfax
Bill Roberts, City of Grass Valley
Joan Phillippe, Town of Loomis
Milt Gottardi, City of Loyalton
Andy Cassano, City of Nevada City
Conrad Montgomery, City of Placerville
Terry Jamin, City of South Lake Tahoe
Don Crow, State Department of Housing & Community Development
Dave Ziegler, Tahoe Regional Planning Agency

APPENDIX 6

GOVERNMENT CODE SECTION 65584
(As of January 1, 1991)

65584. (a) For purposes of subdivision (a) of Section 65583, the share of a city or county of the regional housing needs includes that share of the housing need of persons at all income levels within the area significantly affected by a general plan of the city or county. The distribution of regional housing needs shall, based upon available data, take into consideration market demand for housing, employment opportunities, the availability of suitable sites and public facilities, commuting patterns, type and tenure of housing need, the loss of units contained in assisted housing developments, as defined in paragraph (8) of subdivision (a) of Section 65583, that changed to non-low-income use through mortgage prepayment, subsidy contract expirations, or termination of use restrictions, and the housing needs of farmworkers. The distribution shall seek to reduce the concentration of lower income households in cities or counties which already have disproportionately high proportions of lower income households. Avoid further impactation of localities with relatively high proportions of lower income households. Based upon data provided by the Department of Finance, in consultation with each council of government, the Department of Housing and Community Development shall determine the regional share of the statewide housing need at least two years prior to the second revision, and all subsequent revisions as required pursuant to Section 65588. Based upon data provided by the department relative to the statewide need for housing, each council of government shall determine the existing and projected housing need for its region. Within 30 days following notification of this determination, the department shall ensure that this determination is consistent with the statewide housing need. The department may revise the determination of governments if necessary to obtain this consistency. The appropriate council of governments shall determine the share for each city or county consistent with the criteria of this subdivision and with the advice of the department

Content of
RHNPs

Local share
includes
income
levels;
boundaries

"Avoid
impaction of
lower income
households"

"Existing
and projected
housing
need"

subject to the procedure established pursuant to subdivision (c) at least one year prior to the second revision, and at five-year intervals following the second revision pursuant to Section 65588. The council of governments shall submit to the department information regarding the assumptions and methodology to be used in allocating the regional housing need. As part of the allocation of the regional housing need, the council of governments, or the department pursuant to subdivision (b), shall provide each city and county with data describing the assumptions and methodology used in calculating its share of the regional housing need. The department shall submit to each council of governments information regarding the assumptions and methodology to be used in allocating the regional share of the statewide housing need. As part of its determination of the regional share of the statewide housing need, the department shall provide each council of governments with data describing the assumptions and methodology used in calculating its share of the statewide housing need. The councils of governments shall provide each city and county with the department's information.

(b) For areas with no council of governments, the department shall determine housing market areas and define the regional housing need for cities and counties within these areas pursuant to the provisions for the distribution of regional housing needs in subdivision (a). Where the department determines that a city or county possess the capability and resources and has agreed to accept the responsibility, with respect to its jurisdiction, for the identification and determination of housing market areas and regional housing needs, the department shall delegate this responsibility to the cities and counties within these areas.

(c) (1) Within 90 days following determination of a council of governments pursuant to subdivisions (a), or the department's determination pursuant to subdivision (b), a city or county may propose to revise the determination of its share of the regional housing need in accordance with the considerations set forth in subdivisions (a). The proposed revised share shall be based on available data and accepted planning methodology, and supported by adequate documentation.

90 - day
period for
local
revisions to
RHNP

(2) Within 60 days after the time period for the revision by the city or county, the council of governments or the department, as the case may be, shall accept the proposed revision, modify its earlier determination, or indicate, based upon available data and accepted planning methodology, why the proposed revision is inconsistent with the regional housing need.

(A) If the council of government of the department, as the case may be, does not accept the proposed revision, then the city or county shall have the right to request a public hearing to review the determination within 30 days.

(B) The city or county shall be notified within 30 days by certified mail, return receipt requested, of at least one public hearing regarding the determination.

(C) The date of the hearing shall be at least 30 days from the date of the notification.

(D) Before making its final determination, the council of governments or the department, as the case may be, shall consider comments, recommendations, available data, accepted planning methodology, and local geological and topographical restraints on the production of housing.

(3) If the council of governments or the department accepts the proposed revision or modifies its earlier determination, the city or county shall use that share. If the council of governments or the department grant a revised allocation pursuant to paragraph (1), the council of government or department shall ensure that the current total housing need is maintained. If the council of governments or department indicates that the proposed revision is inconsistent with the regional housing need, the city or county shall use the share which was originally determined by the council of governments or the department.

(4) The determination of the council of governments or the department, as the case may be, shall be subject to judicial review pursuant to Section 1094.5 of the Code of Civil Procedure.

(5) The council of governments or the department shall reduce the share of regional housing needs of a county if all of the following conditions are met:

(A) One or more cities within the county agree to increase its share or their shares in

Conditions
for reducing
county's
share of
housing

an amount which will make up for the reduction.

(B) The transfer of shares shall only occur between a county or cities within that county.

(C) The county's share of low-income and very low income housing shall be reduced only in proportion to the amount by which the county's share of moderate-income and above moderate-income housing is reduced.

(D) The council of governments or the department, whichever assigned the county's share, shall have authority over the approval of the proposed reduction, taking into consideration the criteria of subdivision (a) of Section 65584.

(6) The housing element shall contain an analysis of the factors and circumstances, with all supporting data, justifying the revision. All materials and data used to justify any revision shall be made available upon request by any interested party within seven days upon payment of reasonable costs of reproduction unless the costs are waived due to economic hardship.

(d) (1) Except as provided in paragraph (2), any ordinance, policy, or standard of a city or county which directly limits, by number, the building permits which may be issued for residential construction, or which limits for a set period of time the number of buildable lots which may be developed for residential purposes, shall not be a justification for a determination or a reduction in the share of a city or county of the regional housing need.

(2) Paragraph (1) does not apply to any city or county which imposes a moratorium on residential construction for a set period of time in order to preserve and protect the public health and safety. If a moratorium is in effect, the city or county shall, prior to a revision pursuant to subdivision (c), adopt findings which specifically describe the threat to the public health and safety and the reasons why construction of the number of units specified as its share of the regional housing need would prevent the mitigation of that threat.

(e) Any authority to review and revise the share of a city or county of the regional housing need granted under this section shall not constitute authority to revise, approve, or disapprove the manner in which the share of

G r o w t h
c o n t r o l
measure may
not justify
reduction of
local share
of regional
housing need
w i t h
exceptions

the city or county of the regional housing need is implemented through its housing program.

(f) A fee may be charged interested parties for any additional costs caused by the amendments made to subdivision (c) by Chapter 1684 of the Statutes of 1984 reducing for 45 to seven days the time within which materials and data shall be available to interested parties.

(g) Determinations made by the department, a council of governments, or a city or county pursuant to this section are exempt from the provisions of the California Environmental Quality Act, Division 13 (commencing with Section 21000) of the Public Resources Code.

(Amended by Statutes 1984, Ch. 1684, Amended Stats. 1989, Ch. 1451, Amended Stats. 1990, Ch. 1441)

CHAPTER 1

INTRODUCTION

Housing Elements

California planning law requires each locality to "make adequate provision for the housing needs of all economic segments of the community" (Government Code Section 65580). To that end, and "to assure that counties and cities recognize their responsibilities in contributing to the attainment of the State housing goal" (Government Code Section 65581(a)), State law has required local governments to prepare housing elements since 1969.

Article 10.6 of the Government Code, effective January 1, 1981 (AB 2853, Chapter 1143, Statutes of 1980, by Assemblyman Roos), codified into law housing element requirements that were developed as regulations in the late 1970s. Localities are required to include in their housing elements an identification of housing needs, resources, and constraints; goals and policies; quantified objectives for the construction, conservation, and rehabilitation of housing units; and a housing program to accomplish these objectives (Government Code Section 65583).

As a basis for assessing housing need, the law requires "documentation of (growth) projections and a quantification of the locality's existing and projected housing needs for all income levels. These existing and projected needs shall include the locality's share of the regional housing need in accordance with Section 65584" (Government Code Section 65583(a)(1)).

Housing Elements and the Regional Housing Needs Plan

Section 65584 of housing element law mandates councils of governments (COGs), or in areas without COGs, the Department of Housing and Community Development (HCD), to prepare regional housing needs plans (RHNPs) for the localities within the region. These regional plans provide cities and counties with a measure of their share of a region's projected need by household income group over the approximately five-year planning period of the housing element. The RHNP also identifies and quantifies existing housing need.

The concept that localities shall plan for population growth and for a share of regional housing need has been part of housing element law since its inception. Only since 1981, however, have COGs and HCD been statutorily required to prepare RHNPs. This mandate aims at ensuring that each community accepts responsibility for the housing needs of not only the resident population but also of those households who might reasonably be expected to live within the jurisdiction were a variety and choice of housing appropriate to their needs available.

Councils of Governments

COGs are voluntary agencies created in 1960 under the Joint Exercise of Powers Act (Government Code Sections 6500 et seq.) and the Area Planning Law (Government Code Sections 65060 et seq.). They carry out a range of regional planning programs affecting land use, housing, transportation, air and water quality, economic development, health

systems, and criminal justice. A COG's jurisdiction can be single-county, multi-county, or, in some cases, part of a county. Many are designated as areawide clearinghouses for review of environmental documents and local grant applications for federal funds. (Appendix 1 lists California COGs.)

Given their regional perspective and review and planning experience, COGs are well suited for preparing equitable growth allocation plans. They must, however, rely on the cooperation and good will of the localities for the acceptance and implementation of the plans.

The Department of Housing and Community Development

HCD plays a multiple role in the regional housing needs planning process. Under Section 65584, the department allocates shares of statewide need to COGs and advises COGs in their preparation of RHNP's. In some instances, HCD has prepared the RHNP for a COG area at the request of the COG. HCD also reviews plans for consistency with statewide housing needs; and, under Section 65585, reviews the local housing elements that contain the regional share figures. In non-COG areas, HCD prepares the RHNP.

Purposes of This Manual

HCD's experience in reviewing COG RHNP's and housing elements has demonstrated the need for clarification of the law governing RHNP's. For example, some COGs provide data on the number of projected households, while others provide data on projected housing units needed. Also, many localities have been unsure about what plan data to use in the housing element and how to use it.

This "how to" manual is intended to clarify the law, provide a statewide baseline of suggested procedures and data sources to ease the COG's task in developing an RHNP, and foster more consistent plans statewide.

The manual, however, is not intended to supplant the normal technical assistance the Department provides. It is intended to help pinpoint problem areas and make the process more efficient. COGs with more complex regional problems and processes, in particular, should continue to consult with HCD.

We hope that localities will find plans prepared with the assistance of this manual equitable and easier to use. The ultimate goal is to further increase the effectiveness of the housing element in helping localities to improve their real-world housing situations.

Step 1: State provides COG with its regional share of statewide housing need.

Who: Department of Housing and Community Development (HCD)
When: Two years prior to housing element due date. (See Appendix 6)

Authority: "Based upon data provided by the Department of Finance, in consultation with each council of governments, the Department of Housing and Community Development shall determine the regional share of the statewide housing need at least two years prior to the second revision, and all subsequent revisions as required pursuant to Section 65588."
(Section 65584(a))

The term "housing need" includes existing need and projected need by income level.

Existing Housing Need

Existing need, for the purposes of the RHNP, includes the current number of households in the region by income level and the number of occupied and vacant housing units which are available to meet the needs of these households.

HCD will provide COGs with the following:

1. The most recent State Department of Finance (DOF) report containing household, total housing unit, and vacant housing unit estimates for each locality in the region.
2. Estimates of the county and regional percentages of households in four income groups.

Projected Housing Need

Projected housing need includes the projected number of households, by income group, at the end of the planning period.

HCD will provide the COG with the following:

1. By county, the latest DOF or HCD household projections, accompanied by the DOF population projections on which they are based.
2. By county, the projected percentage of households in each income group.
3. Recommended methods for calculating the new construction needed, by income group, during the planning period, based on the above data. The methodology includes a method for estimating the number of units needed to accommodate the projected households.

Household Income Group Estimates

After every decennial U.S. Census, HCD prepares estimates for each county of the proportion of households in four income groups. The groups are based on the income groups defined in State law and implemented by HUD and HCD in their housing finance programs. The definitions include family size adjustment factors. For example, the

income limit for a one-person household is 0.7 times the four-person income limit for that income level.

In general, the income limits for a four-person household are the following:

Very Low Income	Income not exceeding 50% of the median family income of the metropolitan area or nonmetropolitan county.
Other Lower Income	Income between 50% and 80% of the median family income of the metropolitan area or nonmetropolitan county.
Moderate Income	Income between 80% and 120% of the median family income of the metropolitan area or nonmetropolitan county.
Above Moderate Income	Income above 120% of the median family income of the metropolitan area or nonmetropolitan county.

Step 2: Determine the regional existing and projected housing need.

Who: The Council of Governments

When: At least one year prior to the housing element due date. (See Appendix 6)

Authority: "Based upon data provided by the Department of Housing and Community Development relative to the statewide need for housing, each council of governments shall determine the existing and projected housing need for its region." (Section 65584(a))

In this step the COG either accepts or modifies the housing needs determinations provided to it in Step 1. If the COG accepts the HCD's determinations, or decides to use a higher household projection than that of HCD, this step may be combined with Step 6 (adoption of the RHNP) below.

Steps 2, 4, and 6 have the same statutory deadlines. In practice these steps are often done simultaneously. For this reason, if the COG proposes to modify HCD's regional needs determinations (other than to increase the household projections), it is important that the COG's determinations be provided to HCD as soon as possible and before the work of preparing the local allocations is performed. Otherwise, the local allocations may need to be redone if HCD, in Step 8, does not accept the COG's determinations.

Most COGs have accepted, or increased, HCD's determinations and have provided HCD with a complete draft of the RHNP for review instead of using the two-stage process described here in Steps 2 and 6.

Step 3: State review of regional projected housing need determinations for consistency with the statewide housing need.

Who: HCD

When: Within 30 days following notification of the determination.

Authority: "Within 30 days following notification of this determination, the Department of Housing and Community Development shall ensure that this determination is consistent with the statewide housing need and may revise the determination of the council of governments if necessary to obtain this consistency." (Section 65584(a))

A COG's projected regional housing need determination (Step 2 above) should be equal to or greater than the household projection provided.

HCD will consider approval of lower household projections if there is acceptable substantiating evidence. In some small COGs, for example, major economic events occurring after preparation of the most recent DOF population projections, have necessitated the use of lower figures.

Step 4: Prepare, with the advice of HCD, a draft RHNP which includes each locality's share of the regional housing need.

Who: The COG

When: In time to meet the deadline for Step 6.

Authority: "For purposes of subdivision (a) of Section 65583, a locality's share of the regional housing needs includes that share of the housing need of persons at all income levels within the area significantly affected by a jurisdiction's general plan. The distribution of regional housing needs shall, based upon available data, take into consideration market demand for housing, employment opportunities, the availability of suitable sites and public facilities, commuting patterns, type and tenure of housing need, and the housing needs of farmworkers. The distribution shall seek to avoid further impaction of localities with relatively high proportions of lower income households. . . Each locality's share shall be determined by the appropriate council of governments consistent with the criteria above with the advice of the department." (Section 65584(a))

In this step the COG prepares the allocations to localities as well as the text and any other components of the RHNP. Commonly, COGs consult with the localities in their region in doing this work. The COG may request HCD's advice at any time during this process.

Step 5: Circulate draft RHNP to localities for their review and comments and to HCD for its advice.

Who: The COG

When: In time to meet the deadline for Step 6.

Authority: Same as Step 4.

Prior to adoption, the draft RHNP should be circulated to the localities for their review and comment. Typically, at least 30 days are allowed for this step.

Simultaneously, the draft should be sent to HCD so that HCD may provide its comments. (See Step 8 for a listing of the elements of HCD's review. The list applies to both draft and adopted plans.)

Depending on the responses received, a revised draft may be circulated prior to scheduling the draft plan for consideration for adoption by the COG board.

Step 6: Adoption of the RHNP.

Who: The COG Board

When: At least one year prior to the housing element due date. (See Appendix 6)

Authority: "Based upon data provided by the Department of Housing and Community Development relative to the statewide need for housing, each council of governments shall determine the existing and projected housing need for its region." (Section 65584(a)) (See also Authority for Step 4.)

Typically, the board acts on the draft after holding a public hearing. The Parameters and Guidelines for State reimbursement of COG activities in preparing RHNPs provide that one public hearing shall be reimbursable.

Adoption of an RHNP commences a 90-day local revision period which constitutes Step 7.

Step 7: Local revision process. (Concurrent with Step 8)

Who: Local Governments

When: During the 90 days following the COG's adoption of an RHNP.

Authority: "Within 90 days following a determination of a council of governments pursuant to subdivision (a), . . . a local government may revise the determination of its share of the regional housing need in accordance with the considerations set forth in subdivision (a). The revised share shall be based upon available data and accepted planning methodology, and supported by adequate documentation." (Section 65584(c))

The statute provides that local governments may revise their allocations under an adopted RHNP. The 90-day local revision process is completely distinct from local review of a draft plan. A locality which wants changes to be made in any part of a draft RHNP requests the COG to make the changes. There are no standards or documentation requirements attached to such local requests. Once the plan is adopted, the situation changes. A locality still may request the COG to make a change in any part of the plan, but the locality may also revise its allocation if it follows the statutory procedures.

If a local government decides to adopt a local revision, it must adopt the revision within 90 days of adoption of the RHNP; and the local government must submit the local revision and supporting materials to the COG. The supporting materials should show the data used, how the seven factors in Section 65584(a) were considered, and the methodology used. All documentation of the local revision must be available to the public on request.

Step 8: State review of adopted RHNP. (Concurrent with Step 7)

Who: HCD

When: Within 30 days of notification of adoption of an RHNP.

Authority: "Within 30 days following notification of this determination, the Department of Housing and Community Development shall ensure that this determination is consistent with the statewide housing need and may revise the determination of the council of governments if necessary to obtain this consistency. . . . Each locality's share shall be determined by the appropriate council of governments consistent with the criteria above with the advice of the department." (Section 65584(a))

HCD's authority to revise the COG's RHNP extends only to the regional needs totals and not to the allocations of those needs to localities. However, HCD's authority to review and comment extends to all of the contents of the RHNP pursuant to the provision that the COG shall prepare the plan with the advice of HCD.

In its review of a COG plan, the Department looks at the following:

1. The commencement date and duration of the planning period.
2. The accuracy of the data base.
3. The consistency of the household projections with those provided to the COG by the Department.
4. The planning methodology used in allocating household growth to localities, including:
 - a. How the statutory criteria are used;
 - b. Whether other criteria are used; and
 - c. Whether those additional criteria are consistent with the intent of the statute.
5. The methodology used in the income group planning features of the plan, including:
 - a. What income group categories are used;
 - b. Whether the estimates of the percentage of households in each income group are reasonably accurate;
 - c. How the criteria are used in allocating future households to localities by income group; and
 - d. How the methodology "seeks to avoid further impactation" of lower-income households.
6. The methodology used to compute new construction needs (including the consideration given to allowances for vacancy and normal market removals).
7. The determination of market areas within the region, if applicable.

Step 9: Review of a local revision to a locality's share of regional housing need.

Who: The COG

When: Within 60 days after the 90-day time period for local revisions.

Authority: "Within 60 days after the time period for the local government's revision, the council of governments . . . shall accept the revision or shall indicate, based upon available data and accepted planning methodology, why the revision is inconsistent with the regional housing need." (Section 65584(c))

The COG will review and accept or not each local revision and shall notify the locality of its action, including the reasons for non-acceptance.

"Accepted planning methodology" and other justifications for local revisions might include any of the following:

- The revision uses alternate data that is generally available and reasonably verifiable.
- The revision addresses the seven planning factors listed in Section 65584(a), as the COG was required to address them in its original determination of local shares.
- The revision corrects factual errors, or provides more recent or more authoritative data (such as local removal data in lieu of the COG estimate).

In HCD's opinion, however, locally adopted governmental constraints to housing development, or policies to restrict housing growth for reasons which are inconsistent with statutory intent, are not valid reasons to accept a locality's reduction in its share of regional growth. This interpretation is explicit in Government Code Section 65584(d) for the case of numerical growth controls:

"(1) Except as provided in paragraph (2), any ordinance, policy, or standard of a city, county, or city and county which directly limits, by number, the building permits which may be issued for residential construction, or which limits for a set period of time the number of buildable lots which may be developed for residential purposes, shall not be a justification for a determination or a reduction in a local government's share of the regional housing need."

"(2) Paragraph (1) does not apply to any city, county, or city and county which imposes a moratorium on residential construction for a set period of time in order to preserve and protect the public health and safety. If a moratorium is in effect, the city, county, or city and county shall, prior to a revision pursuant to subdivision (c), adopt findings which specifically describe the impacted public facilities and the reasons why construction of the number of units specified as its share of the regional housing need would prevent the mitigation of that impact."

A local revision may be used in a locality's housing element even if the COG has disapproved it. In such a case, however, HCD may be less likely to consider the element to be in compliance with housing element law.

When a housing element contains a revised local share of regional need, whether approved or disapproved by the COG, Section 65584(c) provides that:

"The housing element shall contain an analysis of the factors and circumstances, with all supporting data, justifying the revision. All materials and data used to justify any revision shall be made available upon request by an interested party within seven days upon payment of reasonable costs of reproduction unless the costs are waived due to economic hardship."

The COG should provide HCD with a summary of the actions which it takes on local revisions.

Step 10: State review of COG actions on local revisions.

Who: HCD

When: Within 30 days after notification.

Authority: Same as Step 8.

HCD will review the approved local revisions for their impact on total regional needs. HCD may also comment on conformance of the approved revisions with statutory criteria.

Step 11: COG response to HCD review of the adopted RHNP and COG actions on local revisions.

Further COG action is needed only if 1) HCD revises the COG's determinations of regional needs, 2) HCD finds that some features of the plan or some acceptances of local revisions are inconsistent with State law, or 3) HCD recommends that revisions be made in the RHNP.

HCD Revision of Regional Need

(Normally, this should not occur as late as Step 8.) As discussed under Step 2 above, if the COG wishes to modify HCD's determination of regional need, the COG should advise HCD of this, and the issue should be resolved before adoption of the complete RHNP. If this is done, then the issue of HCD revision of the COG's determination of regional need is only likely to arise if the COG accepts local revisions which, in the aggregate, reduce the total regional need to the extent that it is inconsistent with the regional share of statewide need.

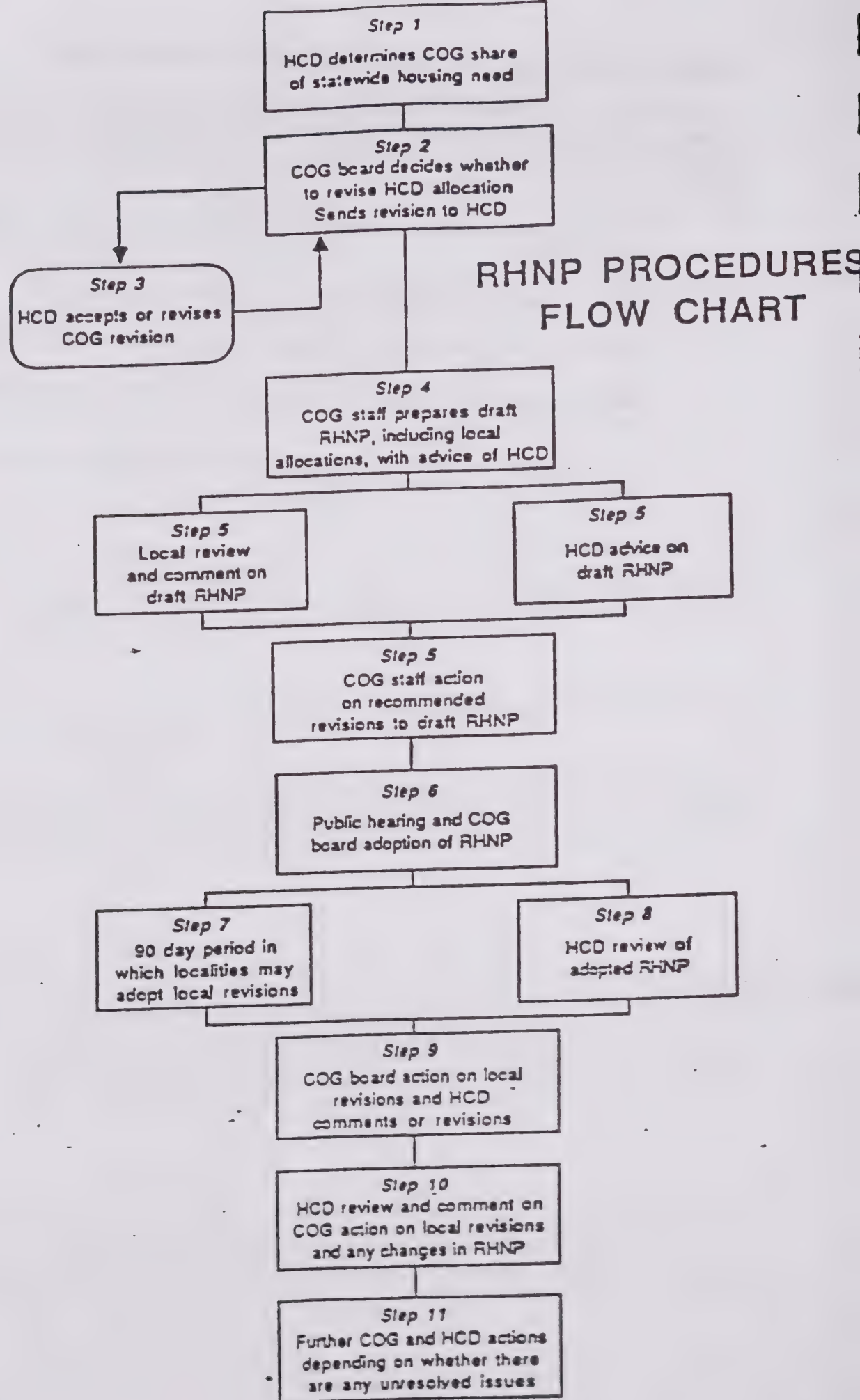
HCD Comments

The appropriate type of COG response is dependent on the nature of HCD's comments. HCD review of the draft RHNP should serve to minimize adverse HCD comments at this point. It is possible that some changes in the RHNP in response to HCD comments would necessitate the commencement of a new 90-day local revision process for affected localities.

Outline of RHNP Preparation Process In Non-COG Areas

The following is a summary of the steps involved in the preparation of a regional housing needs plan in areas in which there is no council of governments. The process is similar to the one for COG areas, but is simpler because HCD performs both the State and COG roles.

1. HCD prepares the draft RHNP, consulting as necessary with local planning departments.
2. HCD circulates the draft RHNP for local review and comment.
3. HCD adopts the plan, which initiates a 90-day local revision period.
4. Local governments may adopt local revisions and send them and supporting documentation to HCD.
5. HCD responds to any local revisions, either accepting them or not.



Appendix E

***COUNTY OF EL DORADO
HOUSING CONDITION SURVEY***

COUNTY OF EL DORADO
HOUSING CONDITION SURVEY
JUNE 1990

INTRODUCTION/SURVEY METHODOLOGY

The County of El Dorado contracted with the Rural California Housing Corporation (RCHC) for services to conduct housing condition surveys in the unincorporated territory. In consultation with El Dorado County officials, El Dorado Economic Development selected 19 communities to be surveyed. However, the surveyors found that the housing stock within two of those communities was in standard condition and did not need to be surveyed. The surveys allow the county to determine the rehabilitation need within each of these unincorporated communities and to categorize the number and types of units according to rehabilitation need.

The survey teams consisted of RCHC staff members. Two teams of two housing rehabilitation specialists surveyed the 19 communities in El Dorado County in June 1990. The data collected was entered into a computer system capable of sorting the housing conditions by need and by street address. (See Appendix D for Qualifications Statement.)

County maps were used to locate residential dwellings which were identified in drive-by inspections. Exterior housing conditions of each unit were evaluated based upon State Department of Housing adopted criteria which rates the condition of five housing elements: foundation, roofing, siding, windows and doors. The units were identified by address and rated with a numbered assessment for each of these five elements, the total of which comprises the rating for each unit. For example, a home that needs a new roof (15 points), paint (3 points) and some window replacement (5 points) would be given a total rating of 23. This rating of 23 would then categorize the unit as needing moderate repairs. (See Appendix A for Survey Instrument.)

The state criteria rates as "standard/sound" units that are structurally sound and do not need any repair or show signs of deferred maintenance.

"Minor" rehabilitation are units that appear structurally sound but show signs of deferred maintenance or upkeep. The house may need a roof replacement, or new windows and exterior paint.

"Moderate" rehabilitation involves the repair of more than one rated system. This category varies widely, from a unit that needs a replacement floor and new siding to a unit that needs the replacement of the roof, electrical system, windows and doors.

"Substantial" rehabilitation replaces several major systems, such as complete or partial foundation work, repair or replacement of exterior siding, reconstruction of roof rafters and deck prior to replacing shingles and complete replumbing.

"Dilapidated" units are those that are in such serious disrepair that all rated systems need repair, and compliance with Uniform Building Code would not be cost effective.

It is important to note when reading housing condition data, that units are evaluated from the outside only. While a drive-by inspection can determine whether or not a home needs a new foundation or roof, it cannot identify whether the plumbing needs to be replaced or whether the home has an unsafe electrical system. However, the status of the items evaluated does suggest the condition of the overall structure. For instance, a wood frame home which does not have a foundation probably will have an old electrical system. While the overall rating system accounts for this, the specific interior needs of any particular unit are not known until a housing inspection is conducted.

The surveyors did an initial survey of each community to locate the pockets of rehabilitation need. After defining the areas of concentrated rehabilitation need, the surveyors then surveyed all units within this designated area. Therefore, the results that follow do not always represent the total number of units within a community. Smaller communities were surveyed in their entirety, while the larger communities were surveyed only in the designated areas of concentrated rehab need.

Using the state adopted criteria, the survey team assessed each housing unit within an area defined as needing rehabilitation in the following communities in unincorporated El Dorado County: Camino, Camino Heights, Cool/Pilot Hill, Diamond Springs, El Dorado, Garden Valley, Georgetown, Greenwood, Grizzly Flat, Kelsey, Latrobe, Meyers, Pleasant Valley, Pollock Pines, Shingle Springs and Smith Flat.

Two other communities--El Dorado Hills and Rescue--were surveyed and found to have no significant rehabilitation need. Therefore, the surveyors did not survey each housing unit in these two communities.

The gathered data was computed and analyzed by community and then mapped by street. When mapping, the surveyors divided the communities into small sections, by street, numbered each section, and analyzed the housing stock within each numbered section--the results of which follow on the analysis pages and color coded maps. (See Appendix C for housing condition maps and corresponding analysis pages.)

Noted on the data print-outs are single trailers/mobile homes, trailer/mobile home parks, duplexes, triplexes, four-plexes, apartment complexes, cabins/shacks, historic structures and abandoned structures. See Appendix B for this listing of rehabilitation need by address and a key to the type of housing unit.

FINDINGS

El Dorado County Housing Condition Survey 1989

El Dorado County has been experiencing rapid growth--from a county that was substantially rural into one that serves as a suburb to Sacramento area commuters. As a result of this transition, many older homes in need of rehabilitation are scattered among the new homes being constructed for those residents who work in the Sacramento area. Also, many of the new homes are built in subdivisions, El Dorado Hills for example, that can be easily separated from the older, substandard homes.

Admittedly, the percentage of standard units greatly outnumbers the percentage of substandard units. However, the substandard units should not be overlooked since many of these units serve as the only affordable housing opportunity for low-income El Dorado County residents. And the new subdivisions within the county are not affordable to low-income residents.

The individual communities vary greatly in their need for rehabilitation. For example, 66% of the housing stock surveyed in Camino is in need of repair while only 12% of the housing stock surveyed in Meyers is rated as below standard. Descriptions of the individual communities follow.

CAMINO
Target Area Survey

<u>Condition</u>	<u>No. of Units</u>	<u>% of Surveyed Units</u>
MINOR	36	23½
MODERATE	41	27½
SUBSTANTIAL	23	15½
DILAPIDATED	1	1½

TOTAL SUBSTANDARD	101	66½
STANDARD	53	34½

TOTAL	154	100½

Camino is just north of Highway 50, east of Placerville. The area surveyed centers around Snows Road and Carson Road and is bound by Roosevelt Avenue to the south and Third Street to the north. The surveyors defined this area as the only portion of Camino with concentrated rehabilitation need. The remainder of the community contains mostly standard units.

The above data shows that 66½ of the housing stock within this defined rehab area is in need of rehabilitation. Each street contains a high percentage of substandard units. Of the units needing rehabilitation, 64½ need moderate to substantial repairs. There is only one dilapidated unit.

CAMINO HEIGHTS
Target Area Survey

<u>Condition</u>	<u>No. of Units</u>	<u>% of Surveyed Units</u>
MINOR	5	19%
MODERATE	5	19%
SUBSTANTIAL	0	0%
DILAPIDATED	0	0%
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TOTAL SUBSTANDARD	10	38%
STANDARD	16	62%
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TOTAL	26	100%

Camino Heights is located along Highway 50, just west of Camino. The area surveyed and defined as needing rehabilitation lies parallel to Highway 50 and includes Five Mile Road and Carson Road. The remainder of the community contains mostly standard units.

The defined rehab area contains only 26 units, 10 of which need rehabilitation. Of the units needing rehabilitation, all need only minor or moderate repairs. None of the units are dilapidated or need substantial repairs.

COOL/PILOT HILL
Community-wide Survey

<u>Condition</u>	<u>No. of Units</u>	<u>Percent of Total</u>
MINOR	6	5%
MODERATE	45	35%
SUBSTANTIAL	2	2%
DILAPIDATED	0	0%

TOTAL SUBSTANDARD	53	42%
STANDARD	75	58%

TOTAL	128	100%

Cool and Pilot Hill are located along Highway 49 near the Placer County line. The survey includes both communities and the area between the communities.

Over half of the units surveyed are in standard condition. However, of the units needing rehabilitation, 85% need moderate repairs. Most of those units needing moderate repair are mobile homes located in a mobile home park on Salmon Falls Road.

DIAMOND SPRINGS
Target Area Survey

<u>Condition</u>	<u>No. of Units</u>	<u>% of Surveyed Units</u>
MINOR	22	5%
MODERATE	28	6%
SUBSTANTIAL	7	2%
DILAPIDATED	3	1%

TOTAL SUBSTANDARD	60	14%
STANDARD	380	86%

TOTAL	440	100%

Diamond Springs is located along Highway 49, south of Highway 50. Of the 1150 units located in the Diamond Springs area, the surveyors assessed 440 units in the older, central core area. The area surveyed centers around Pleasant Valley Road and Missouri Flat Road and contains a higher concentration of rehab need as compared to the newer subdivisions surrounding the community. The newer units in the Deer Park area are not included in this data.

The above data shows that 86% of the units are in standard condition. However, of the 380 standard units, 223 units are mobile homes located in Westwood Mobile Park and Diamond Springs Mobile Home Park. The substandard units are scattered throughout the community in small pockets which may lie directly adjacent to standard housing. Within the older core section of Diamond Springs there are 57 units in need of rehabilitation, ranging from minor to substantial; and three units are dilapidated.

EL DORADO
Community-wide Survey

<u>Condition</u>	<u>No. of Units</u>	<u>Percent of Total</u>
MINOR	27	19%
MODERATE	8	5%
SUBSTANTIAL	4	3%
DILAPIDATED	6	4%
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TOTAL SUBSTANDARD	45	31%
STANDARD	101	69%
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TOTAL	146	100%

El Dorado is located east of Highway 49 and south of Highway 50, between Shingle Springs and Diamond Springs. This community contains many older homes showing signs of deterioration.

The above data represents the entire community of El Dorado. The data demonstrates that 31% of the 146 units are in need of rehabilitation. Many of the units on El Dorado and Fall streets are in standard condition, most needing only paint. Page Lane, Willow Street and Union Mine Road also contain a high percentage of standard units. The substandard units are interspersed throughout the community with the majority of those units needing only minor rehabilitation. However, of the 45 units needing rehabilitation, 13% are dilapidated.

GARDEN VALLEY
Community-wide Survey

<u>Condition</u>	<u>No. of Units</u>	<u>Percent of Total</u>
MINOR	4	18½
MODERATE	2	9½
SUBSTANTIAL	0	0½
DILAPIDATED	0	0½

TOTAL SUBSTANDARD	6	27½
STANDARD	16	73½

TOTAL	22	100½

Garden Valley is a tiny community located along Garden Valley Road, between Highway 49 and 193. Of the 22 units surveyed, only six units showed signs of needing rehab and those units needed only minor and moderate repairs.

GEORGETOWN
Community-wide Survey

<u>Condition</u>	<u>No. of Units</u>	<u>Percent of Total</u>
MINOR	13	13%
MODERATE	14	13%
SUBSTANTIAL	3	3%
DILAPIDATED	1	1%

TOTAL SUBSTANDARD	31	30%
STANDARD	73	70%

TOTAL	104	100%

The community of Georgetown is located along Highway 193 at the northern end of El Dorado County. This rural community located in the historic Mother Lode area attracts many tourists because of its gold rush history.

All 104 units in Georgetown were surveyed and 30% of those units need rehabilitation with 1% being dilapidated. Most of the homes located south of Highway 193 are in standard condition. However, north of the highway and along the highway substandard units subsist along with standard units.

GREENWOOD
Community-wide Survey

<u>Condition</u>	<u>No. of Units</u>	<u>Percent of Total</u>
MINOR	4	31½
MODERATE	3	23½
SUBSTANTIAL	1	8½
DILAPIDATED	0	0½

TOTAL SUBSTANDARD	8	62½
STANDARD	5	38½

TOTAL	13	100½

Greenwood is located along Highway 193, midway between Cool and Georgetown. This tiny community consists of only 13 units, eight of which are substandard.

GRIZZLY FLAT
Target Area Survey

<u>Condition</u>	<u>No. of Units</u>	<u>% of Surveyed Units</u>
MINOR	0	0%
MODERATE	3	19%
SUBSTANTIAL	4	25%
DILAPIDATED	7	44%

TOTAL SUBSTANDARD	14	88%
STANDARD	2	12%

TOTAL	16	100%

Grizzly Flat is located well south of Highway 50 along Grizzly Flat Road. This small, rural community rests in the El Dorado National Forest at Grizzly Park near the base of the Sierra Mountains. Many of the homes located in this area are vacation homes, but some year-round homes co-exist.

The majority of the units in Grizzly Flat, vacation and year-round, are in standard condition. However, the surveyors did discover a few units that are substandard. These units are located along Grizzly Flat Road, Old Nail Road, and Sciaron Road. Noteworthy are the number of dilapidated units found in this area. Of the 16 units surveyed, seven are dilapidated--six of which are located on Sciaron Road and four of which appear to be abandoned.

KELSEY
Community-wide Survey

<u>Condition</u>	<u>No. of Units</u>	<u>Percent of Total</u>
MINOR	6	13½
MODERATE	4	8½
SUBSTANTIAL	0	0½
DILAPIDATED	4	8½

TOTAL SUBSTANDARD	14	29½
STANDARD	34	71½

TOTAL	48	100½

Kelsey is a small community located along Highway 193, north of Placerville. This community, consisting of only 48 units, has a 29½ rehabilitation need. Of the 34 standard units, 15 units are mobile homes located in a mobile home park on Sierra Pines Road.

Most of the 14 units requiring rehabilitation need only minor or moderate repairs. However, 29½ of the substandard units are dilapidated.

LATROBE
Community-wide Survey

<u>Condition</u>	<u>No. of Units</u>	<u>Percent of Total</u>
MINOR	1	10%
MODERATE	1	10%
SUBSTANTIAL	2	20%
DILAPIDATED	0	0%

TOTAL SUBSTANDARD	4	40%
STANDARD	6	60%

TOTAL	10	100%

The community of Latrobe rests at the intersection of Latrobe Road and South Shingle Road in the southwestern corner of El Dorado County. There are only 10 houses in this area, four of which need rehabilitation.

MEYERS
Target Area Survey

<u>Condition</u>	<u>No. of Units</u>	<u>% of Surveyed Units</u>
MINOR	44	7%
MODERATE	33	5%
SUBSTANTIAL	0	0%
DILAPIDATED	0	0%

TOTAL SUBSTANDARD	77	12%
STANDARD	551	88%

TOTAL	628	100%

Meyers is located along Highway 50 in the Sierra Mountains, just south of the City of South Lake Tahoe. The area surveyed consists of the community of Meyers and unincorporated South Lake Tahoe. Surveyors found that many of the homes in this area are vacation homes co-existing with year-round residences.

The Lake Tahoe area has become an international playground for recreation and tourism. Thus, the surrounding unincorporated area reflects the wealthy ambiance of this resort town. Many of the homes, both vacation and year-round, are large, expensive houses owned by the very wealthy. The houses along Pioneer Trail and its surrounding streets, east of Highway 50, fit into this mold. Also, the units west of Highway 50, along Upper Truckee Road and Lake Tahoe Boulevard carry this characterization.

However, nestled among these lavish homes--west of Highway 50 and south of the Lake Tahoe Golf Course--are smaller, less expensive units needing rehabilitation. Notably, these units, both vacation and year-round, need only minor and moderate repairs; none of the units are dilapidated or need substantial repairs. The surveyors surveyed vacation and year-round units, but noted that most of the units needing repairs are year-round houses.

The above data represents only those units located in the Meyers area--west of Highway 50, south of Lake Tahoe Golf Course; and east of Highway 50, south of Apache Avenue (along Highway 89). The remainder of the community contains mostly standard units and was not surveyed. (See Exhibit C for Map of Areas Surveyed.)

MT. AUKUM
Target Area Survey

<u>Condition</u>	<u>No. of Units</u>	<u>% of Surveyed Units</u>
MINOR	3	16%
MODERATE	1	5%
SUBSTANTIAL	14	74%
DILAPIDATED	0	0%
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TOTAL SUBSTANDARD	18	95%
STANDARD	1	5%
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TOTAL	19	100%

Mt. Aukum is a tiny community located on the southern border of El Dorado County, near the Amador County line. All units surveyed are located along Mt. Aukum Road. Only one of the 19 units is standard. The condition of the substandard units ranges from needing minor repairs to substantial repairs. All of the 14 units needing substantial repairs are apartments located on Mt. Aukum Road.

PLEASANT VALLEY
Community-wide Survey

<u>Condition</u>	<u>No. of Units</u>	<u>Percent of Total</u>
MINOR	2	1½
MODERATE	9	5½
SUBSTANTIAL	2	1½
DILAPIDATED	4	2½

TOTAL SUBSTANDARD	17	9½
STANDARD	178	91½

TOTAL	195	100½

Pleasant Valley is located south of Highway 50 at the intersection of Pleasant Valley Road and Sly Park Road. Surveyors found 9½ of the units in need of rehabilitation.

POLLOCK PINES
Target Area Survey

<u>Condition</u>	<u>No. of Units</u>	<u>% of Surveyed Units</u>
MINOR	47	17½
MODERATE	46	16½
SUBSTANTIAL	14	5½
DILAPIDATED	1	0½
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TOTAL SUBSTANDARD	108	38½
STANDARD	174	62½
<hr/>		
TOTAL	282	100½

Pollock Pines is located along Highway 50, east of Placerville. The area surveyed is bound approximately by Pine Street to the north, Highway 50 to the south, Manzanita Street to the west, and Oak and Willow streets to the east. The remainder of the community was not surveyed since most of the units are in standard condition, including 121 mobile homes in three mobile home parks on Forebay Road.

The above data represents the older, central core area of Pollock Pines. The survey found that 38½ of the housing stock within this area is in need of rehabilitation with only one dilapidated unit. Most of the units needing rehabilitation call for only minor and moderate repairs with 14 units requiring substantial work.

SHINGLE SPRINGS
Target Area Survey

<u>Condition</u>	<u>No. of Units</u>	<u>% of Surveyed Units</u>
MINOR	20	9%
MODERATE	27	12%
SUBSTANTIAL	13	6%
DILAPIDATED	3	1%

TOTAL SUBSTANDARD	63	28%
STANDARD	165	72%

TOTAL	228	100%

Shingle Springs is located along Highway 50, west of Placerville. The area surveyed is south of Highway 50, concentrating around South Shingle Road and Durock Road. The surveyors discovered that the majority of the units needing rehabilitation are located along unpaved roads, not easily accessible or noticeable from the main streets. Of the units surveyed, 28% are substandard and three are dilapidated.

SMITH FLAT
Target Area Survey

<u>Condition</u>	<u>No. of Units</u>	<u>% of Surveyed Units</u>
MINOR	7	13%
MODERATE	19	35%
SUBSTANTIAL	1	2%
DILAPIDATED	0	0%
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TOTAL SUBSTANDARD	27	50%
STANDARD	28	50%
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TOTAL	55	100%

Smith Flat is an unincorporated area just east of Placerville. The above data shows that half of the 55 units surveyed are substandard. Of the units needing rehabilitation, 70% need moderate repairs, 26% need minor repairs, 4% need substantial repairs, and none are dilapidated. Most of the substandard units are located on Cemetery Road, Smith Flat Road and Jacquier Road.

Appendix F

***DEVELOPMENT STANDARDS
FOR RESIDENTIAL ZONE DISTRICTS***

Development Standards for Residential Zone Districts

Zone	Max. Density	Max. Coverage	Setbacks*	Max. Height
RM	20 d.u./ac.	50%	20' 5' 10'	50'
R2	20 d.u./ac	50%	20' 5' 15'	40'
R1	5 d.u./ac.	35%	20' 5' 15'	35'
R20,000	2 d.u./ac.	None	30' 10' 30'	35'
R1A	1 d.u./ac.	35%	30' 15' 30'	35'
R2A	1 d.u./2 ac.	None	30' 20' 30'	35'
RE-5	1 d.u./5 ac.	None	30' 30' 30'	35'
RE-10	1 d.u./10 ac.	None	30' 30' 30'	35'

* Front, Side, Rear

Source: El Dorado County Code

Development Standards for Residential Zone Districts

Zone	Max. Density	Max. Coverage	Setbacks*	Max. Height
RM	20 d.u./ac.	50%	20' 5' 10'	50'
R2	20 d.u./ac	50%	20' 5' 15'	40'
R1	5 d.u./ac.	35%	20' 5' 15'	35'
R20,000	2 d.u./ac.	None	30' 10' 30'	35'
R1A	1 d.u./ac.	35%	30' 15' 30'	35'
R2A	1 d.u./2 ac.	None	30' 20' 30'	35'
RE-5	1 d.u./5 ac.	None	30' 30' 30'	35'
RE-10	1 d.u./10 ac.	None	30' 30' 30'	35'

* Front, Side, Rear

Source: El Dorado County Code

Development Standards for Residential Zone Districts

Zone	Max. Density	Max. Coverage	Setbacks*	Max. Height
RM	20 d.u./ac.	50%	20' 5' 10'	50'
R2	20 d.u./ac	50%	20' 5' 15'	40'
R1	5 d.u./ac.	35%	20' 5' 15'	35'
R20,000	2 d.u./ac.	None	30' 10' 30'	35'
R1A	1 d.u./ac.	35%	30' 15' 30'	35'
R2A	1 d.u./2 ac.	None	30' 20' 30'	35'
RE-5	1 d.u./5 ac.	None	30' 30' 30'	35'
RE-10	1 d.u./10 ac.	None	30' 30' 30'	35'

* Front, Side, Rear

Source: El Dorado County Code

Development Standards for Residential Zone Districts

Zone	Max. Density	Max. Coverage	Setbacks*	Max. Height
RM	20 d.u./ac.	50%	20' 5' 10'	50'
R2	20 d.u./ac	50%	20' 5' 15'	40'
R1	5 d.u./ac.	35%	20' 5' 15'	35'
R20,000	2 d.u./ac.	None	30' 10' 30'	35'
R1A	1 d.u./ac.	35%	30' 15' 30'	35'
R2A	1 d.u./2 ac.	None	30' 20' 30'	35'

RE-5	1 d.u./5 ac.	None	30'	30'	30'	35'
RE-10	1 d.u./10 ac.	None	30'	30'	30'	35'

* Front, Side, Rear

Source: El Dorado County Code

Development Standards for Residential Zone Districts

Zone	Max. Density	Max. Coverage	Setbacks*	Max. Height
RM	20 d.u./ac.	50%	20' 5' 10'	50'
R2	20 d.u./ac	50%	20' 5' 15'	40'
R1	5 d.u./ac.	35%	20' 5' 15'	35'
R20,000	2 d.u./ac.	None	30' 10' 30'	35'
R1A	1 d.u./ac.	35%	30' 15' 30'	35'
R2A	1 d.u./2 ac.	None	30' 20' 30'	35'
RE-5	1 d.u./5 ac.	None	30' 30' 30'	35'
RE-10	1 d.u./10 ac.	None	30' 30' 30'	35'

* Front, Side, Rear

Source: El Dorado County Code

Parking Requirements for Residential Development

17.18.040 Adjustments and special parking requirements.

D. Increases and Decreases in Requirements:

1. Increases: The number of parking spaces required by this Ordinance may be increased by the approving authority as a condition of a special use permit or planned development permit where it is determined that the proposed use would have a parking demand in excess of the requirements of this Ordinance.
2. Decreases: Administrative relief from the strict compliance with the provisions for commercial and industrial uses may be granted where the Planning Director or Planning Commission finds all of the following:
 - o The intent of the Parking Ordinance is preserved.
 - o The parking provided is sufficient to serve the use for which it is intended.
 - o The modification will not be detrimental to the public, health, or safety.

In considering requests for reduction in the number of parking spaces, the approving authority shall consider:

- o Size and type of use or activity.
- o Composition and number of tenants.
- o Peak traffic and parking loads.
- o Rate of turnover.
- o Availability of public transportation including car pools or employer provided transportation.

17.18.060 SCHEDULE OF OFF-STREET VEHICLE PARKING REQUIREMENTS

<u>Use</u>	<u>Minimum Off-Street Parking</u>
<u>RESIDENTIAL</u>	
1. Conventional single-family detached	2 spaces not in tandem.
2. Single-family with second unit (granny flat; guest house)	2 spaces not in tandem plus 1 space for each additional unit.
3. Single-family attached (townhouse, condominium, cluster development)	2 spaces not in tandem per unit.
4. Apartments:	
Studio/1 bedroom	1.6 spaces per unit.
Two or more bedrooms	2 spaces per unit.
5. Rooming houses, boarding homes, clubs or fraternity housing with sleeping facilities	1 space per bedroom.
6. Mobile home park	2 spaces per mobile home space plus 1 visitor space for every 5 units.

17.18.070 Parking Lot Construction Standards

B. Multiple Family and Mobile Home Park Parking

Parking areas for multiple family residential and mobile home park developments requiring more than four (4) parking spaces shall be constructed to the same requirements as commercial and industrial parking areas. Parking access for multiple family developments and mobile home parks requiring four (4) or fewer parking spaces shall be graded and surfaced with a minimum of a double application of bituminous seal coating over four (4) inches of Class 2 aggregate base. The base shall be compacted to ninety-five percent (95%). Parking spaces within a carport shall be a minimum dimension of nine (9) feet in width and twenty (20) feet in depth.

C. Single Family Parking

Parking areas for single family residential developments in Class 1 subdivisions and mobile home park developments shall be graded and surfaced with a minimum of two (2) inches of asphaltic concrete over four (4) inches of aggregate base or equivalent in concrete. All other single family residential parking areas may be constructed with a minimum of four (4) inches of gravel base or equivalent, compacted to ninety-five percent (95%).

D. Striping

All parking stall spaces shall be clearly delineated with white or yellow painting.

E. Vertical Clearance

Every parking stall and aisle shall have a minimum of eight (8) feet vertical clearance.

F. Maintenance

All parking stalls, aisles, and access driveways shall be maintained in good condition and shall be kept free of debris and outside storage.

G. Wheel Stops

All parking stalls other than for single family residential parking shall provide concrete wheel stops to prevent vehicles from encroaching into or onto public right-of-way and adjoining properties. Wheel stops shall be anchored securely to the asphalt. In developments where sidewalks or concrete curbs are provided, such sidewalks or curbs may serve as the wheel stops, provided vehicle overhang over the sidewalk or planter area does not exceed two (2) feet.

H. Directional Arrows and Signage

Aisles, approach lanes, pedestrian crossings, and drop-off/loading areas shall be clearly marked with directional lines and signs to expedite traffic movement.

Landscaping Requirements for Residential Development

Section 17.18.090 Parking Lot Landscaping and Buffering

At the time of development of any off-street parking lot required by this Ordinance, landscaping and buffers shall be required in accordance with the provisions of this section.

A. Landscape Area Required

All open automobile parking areas that contain five (5) or more parking spaces shall provide a landscape buffer along those property boundaries where the parking facility abuts or adjoins a public road, street or highway or abuts a property under different ownership or zoning district. Where a parking facility contains ten (10) or more parking spaces, additional landscaping equivalent to five (5) percent of the gross area used for parking and access purposes, exclusive of the landscape buffer, shall be devoted to landscaping.

B. Landscape Plan Required

Prior to the issuance of any building permit which is subject to parking lot landscaping as required by this Ordinance, a landscape plan subject to the approval of the Planning Director shall be required. The landscape plan shall designate all areas to be landscaped and shall include the location; size, variety and number of all plant materials and water supply. All landscaping shall be installed and maintained in accordance with the approved landscape plan.

C. Landscape Improvement Standards

Landscaping for parking lot facilities shall be required as follows:

1. Landscaped buffers along a public road, street or highway or property under a different ownership or zoning district shall be a minimum of five (5) feet in width, exclusive of any curbs, and shall be measured from the property line.
2. Landscaping within a parking facility other than the landscape buffers, shall have a minimum dimension of four (4) feet and a minimum area to twenty (20) square feet, exclusive of any curbs.
3. A minimum of three (3) trees and six (6) shrubs shall be provided per each one hundred (100) feet in the landscape buffers required along the property boundaries and public roads, streets or highways. The size and species shall be approved by the Planning Director.

4. At least one (1) tree having a minimum size of fifteen (15) gallons or equivalent shall be provided for each ten (10) parking spaces exclusive of the landscape buffers.
5. All plant materials shall be nonpoisonous and shall be maintained free from weeds, debris and undesirable materials. Plant materials showing damage from insects or disease shall be replaced in accordance with the approved landscape plan.
6. Vehicles may overhang landscaped planters a maximum of two (2) feet, providing that the landscape area maintains a minimum unobstructed width of three (3) feet and permanent curbs, bumper or wheel stops or similar devices are installed.
7. Landscaped areas shall emphasize the use of living plant material. However, the use of bark, decorative rock, water and similar materials or features may be utilized, providing such materials do not exceed thirty (30) percent of the required landscape area.

Appendix G

***EL DORADO COUNTY
BUILDING DEPARTMENT
POLICIES & PROCEDURES***

POLICY # 90-38B

SUBJECT:

ISSUED 3-26-90

MASTER PLAN POLICY

EFFECTIVE _____

CANCELLATION DATE _____

CODE REFERENCES _____

SUPERSEDES 88-22APURPOSE

The Master Plan system has been established to expedite the application and plan review process for Builders who intend to construct identical residential structures repeatedly on various lots. Since these structures are assumed to be built for sale, a Licensed Contractor must be responsible for their construction. In principle, a plan is submitted, approved, and retained for use on more than just one site. Applications for permits may be submitted using this approved plan, without plan review delays, as long as the current codes are in effect.

FEES

- 1) The application for Master Plan is accompanied by a Plancheck/Set-up fee of \$0.0040 per dollar of building valuation. This fee will be credited toward the first Building Permit secured against that Master Plan.
- 2) This same application and fee process applies when updating Master Plans to current building codes.
- 3) Additional copies of field plan sets may be approved for \$5.00 each.

PLANS

- 1) The Department will assign a Master Plan Number.
- 2) One set of plans submitted for plan review to include:
 - a) Complete working drawings
 - b) Applicable engineering calculations
 - c) Truss specifications (keyed to roof plan)
 - d) Energy compliance documentation for four orientations
- 3) No structural or floor area variations allowed within plan.
Each variation will constitute an individual Master Plan.
- 4) Reversed plans will only be accepted as allowed by policy 89-37B. (effective 5-1-90).
- 5) Plans must reflect most severe lot slope anticipated, or use of plans will be limited to lots of 10 percent grade or less.
- 6) Floor plan page to indicate: Master Plan Number; Number of bedrooms (for septic design;) Climate Zone; and maximum snow load anticipated.

PLAN CHECK

- 1) Plans are examined for code compliance. Applicant is notified of any corrections necessary. Plan review time will approximate the residential plan check time.
- 2) Corrections shall be made on the original tracings. Two corrected sets with wet signatures of designer and engineer (if applicable,) shall be resubmitted for approval. Additional job sets may be included.
- 3) Resubmittal time is 5 - 7 working days.
- 4) Upon approval, an office set of plans is filed by master plan number assigned by the building division. Job set(s) are issued to the builder. One plan set may service multiple permits.

PERMIT ISSUANCE

- 1) Individual permits may be applied for as desired.
- 2) Each application must include:
 - a) Three site plans
 - b) Two driveway profile drawings
 - c) Prescriptive Standards (Grading Questionnaire)
 - d) Two copies of Floor Plan page(s) (effective 5-1-90)
- 3) A licensed Contractor (or his authorized agent) is required to sign each permit application.
- 4) Water, Sewer (Septic,) and Road approvals must be secured prior to permit issuance. See appropriate agencies.

INSPECTIONS

- 1) The builder shall be responsible to have, on site for inspections, the following:
 - a) The approved job set of plans
 - b) The approved Site Plan
 - c) The approved Driveway Profile
 - d) The approved Grading Questionnaire

MODIFICATIONS

NO CHANGES ARE ALLOWED IN THE PLANS ONCE THEY HAVE BEEN APPROVED. STRUCTURAL REVISIONS TO DESIGN MUST BE APPROVED AT THE BUILDING DEPARTMENT. VARIATIONS FROM THE MASTER PLAN NECESSITATE CREATION OF A NEW MASTER PLAN OR RETURN TO CONVENTIONAL PLAN STATUS WITH THE APPROVAL OF JOB-SPECIFIC PLANS.

Appendix H

ORDINANCE 3606



ORDINANCE No. 3606

THE BOARD OF SUPERVISORS OF THE COUNTY OF EL DORADO
DOES ORDAIN AS FOLLOWS:

Section 1. Chapter 17.52 of Title 17 of the El Dorado County Ordinance Code is hereby deleted.

Section 2. Chapter 17.52 is hereby added to Title 17 of the El Dorado County Ordinance Code to read as follows:

CHAPTER 17.52

MOBILEHOMES

17.52.010 Purpose. The purpose of this chapter is to regulate the placement of mobilehomes within the unincorporated portions of El Dorado County. A mobilehome is defined in Title 15.64 of the El Dorado County Ordinance.

17.52.020 Uses permitted by right. Notwithstanding any other provision of this title, the following uses shall be allowed by right:

A. 1. In all zones which permit single-family residences by right, there shall be permitted the placement of one mobilehome per parcel in lieu of such other single-family residence, as defined by Title 15, Chapter 15.64, or

2. Alternatively, there shall be permitted the placement of one mobilehome per parcel in lieu of such other single-family residence where the mobilehome was constructed prior to June 15, 1976, was located and used on the subject parcel as a residence on or before March, 1985, met all regulations pertaining to the placement of mobilehomes in effect at the time of installation. If a new mobilehome replaces an existing mobilehome, it shall meet the requirements of subsection A-1 of this section.

B. One mobilehome or travel trailer may be placed on a site for the purpose of habitation while and during the construction of an authorized main dwelling; provided an occupancy permit is obtained from the building division for the mobilehome or travel trailer and a valid dwelling permit is in effect.

C. One or more commercial coach(es) to be used exclusively as an office for contractors engaged in construction projects but only during the course of construction of the project where a valid building permit has been obtained and remains active. The commercial coach must be located on the same property as the construction project.

D. Such temporary permit shall expire if the temporary residence is removed from the property or if the residence is no longer occupied (90-day period) by a qualifying occupant.

E. The applicant must comply with all other statutes and ordinances relating to zoning development criteria, health and building codes.

F. The applicant shall sign an agreement that at the conclusion of the permit or the violation thereof, the second residence shall be removed from the property or placed in permanent storage pursuant to Section 15.64.263, the county may be authorized to remove the residence and record a lien on the property for the cost thereof. Such agreement may be recorded."

Section 3. Section 17.26.030 of Chapter 17.26 of Title 17 of the El Dorado County Ordinance Code is amended to read as follows:

"17.26.030 Uses permitted by right. The following uses are allowed by right, without special use permit:

A. Single-family detached dwelling;

B. Agricultural uses:

1. Accessory buildings and structures;

C. One unlighted sign not to exceed twelve square feet message area advertising activities on the premises;

~~D. One mobilehome or travel trailer may be placed on a site for the purpose of habitation during the construction of a dwelling; provided an occupancy permit is obtained from the building department for the mobilehome or travel trailer and a valid building permit is in effect;~~

E. Home occupations such as accountant, advisor, appraiser, architect, artist, attorney, author, broker, dressmaker, draftsman, dentist, handicrafts, insurance,

photographer, physician, therapist, musician, teacher and other similar occupations normally conducted by mail or telephone on the premises where the activities do not create a traffic problem; provided, that instruction is not given to groups in excess of four and concerts or recitals are not held, and no display of goods is visible from outside of the property; the use must be carried on in the main building and be incidental to the residential use of the premises and be carried on by a resident thereon;

~~F. One mobile home to be used exclusively as an office for contractors engaged in construction projects, but only during the course of construction of the project, where a valid building permit has been obtained. The mobile home must be located on the same property as the construction project;~~

~~G. There shall be permitted the placement of one mobile home per parcel in lieu of such other single-family residence permitted by right. Mobile homes on a conventional foundation will be placed on parcels three acres or larger. All accessory uses shall be permitted. Creation of parcels less than three acres, with a mobile home on a conventional foundation, shall be prohibited.~~ (Ord. 3366 §2, 1983; Ord. 3364 §1, 1983; prior code §9410(c))

PASSED AND ADOPTED by the Board of Supervisors of the County of El Dorado at a regular meeting of said Board, held on the 21st day of January, 19 86,
by the following vote of said Board:

ATTEST

BILLIE MITCHELL, County Clerk and ex-officio
Clerk of the Board of Supervisors

By Bette Culp
Deputy Clerk

Supervisors Robert E. Dorr,
Ayes: Patricia R. Lowe, James R. Sweeney,
Joseph V. Flynn, Thomas L. Stewart

Noes: None

Absent: None

Joseph V. Flynn
Chairman, Board of Supervisors

DATE	COPIES SENT TO
1-25-86	Shirley
	James R. Sweeney
	Pat. R. Lowe
	Th. L. Stewart

Appendix I

RARE PLANT PRESERVE PROGRAM

EL DORADO COUNTY
BOARD OF SUPERVISORS
AGENDA TRANSMITTAL

RECEIVED

MAR 12 1993

AGENDA TITLE: Rare Plant Preserve Program

DEPARTMENT: Planning

DATE: 2/26/93 PLANNING DEPARTMENT
CAO USE ONLY

CONTACT: Tom Parilo/Steve Hust, *SPH* (SV)

PHONE: 5355

DEPARTMENT SUMMARY AND REQUESTED BOARD ACTION:

Planning Department submitting Rare Plan Study for Board review and action.

RECOMMENDATION: Planning staff recommends that the Board:

1. Accept the 3500 acre preserve system with a geographical distribution as shown in Exhibit A (in the Salmon Falls, Pine Hill and Cameron Park areas);

2. Provide policy direction on the selection of funding mechanism(s) for acquisition of the preserve areas;

3. Provide policy direction on the selection of management entity(ies) for on-going operations and maintenance of the preserve sites.

CAO RECOMMENDATION:

MAR 12 00 PM '93
NOTED BY: [illegible]
E. DORADO COUNTY

BUDGET SUMMARY:

Total Est. Cost \$ _____
Funding
Budgeted \$ _____
New Funding \$ _____
Savings* \$ _____
Other \$ _____
Total Funding Available \$ _____
Change in Net County Cost \$ _____
Explain: _____

Funding Source: () Gen Fund () Other

CAO Office Use Only:

4/5's Vote Req'd () Yes () No
Change In Policy () Yes () No
New Personnel () Yes () No

CONCURRENCES:

Risk Management _____
County Counsel _____
Other _____

BOARD ACTIONS: MAR 09 1993

(over)

Vote: Unanimous _____ or

es:

es:

stentions:

sent:

I hereby certify that this is a true and correct copy of an action taken and entered into the minutes of the Board of Supervisors.

Date: _____

Attest: DIXIE L. FOOTE, Board of Supervisors Clerk

By: _____

EL DORADO COUNTY
BOARD OF SUPERVISORS
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BACKGROUND

Major growth pressures in the Rare Plant Study Area precipitated action in the late 1980's on the rare plant issue. In 1988, representatives from the Department of Fish and Game (DFG) met with County Staff to express concerns about plant protection. All agreed that a regional solution was needed. In Spring, 1990, a development company (whose project was being delayed due to rare plant issues) retained EIP Associates to conduct a study focussing on setting up a preserve system on the Western Slope. Half-way into the study, funding was withdrawn by the developer and the Board of Supervisors agreed to allocate funds for completion of the study. The resultant document, "Preserve Sites and Preservation strategies for Rare Plant Species in Western El Dorado County" was completed in November of 1991 (the study was reviewed and considered by the Board at the May 1992 workshop).

For the benefit of the new Board members, additional information on the rare plant issue is provided below. A more detailed description of the study is provided in the Staff Report for the May 1992 workshop (attached as Exhibit B).

Rare and Endangered Plant Species

Eight species have been identified as either rare or endangered. Five species are currently listed by the State; three are listed on the California Native Plant Society's List 1B and all eight species are Category 2 candidates for Federal Listing as follows:

State Listed Species

El Dorado bedstraw	<i>Galium californicum ssp. sierrae</i>
Layne's butterweed	<i>Senecio Layneae</i>
Pine Hill ceanothus	<i>Ceanothus roderickii</i>
Pine Hill flannelbush	<i>Fremontodendron decumbens</i>
Stebbins' morning glory	<i>Calystegia stebbinsii</i>

CNPS Listed Species

Bisbee Peak rush rose	<i>Helianthemum suffretescens</i>
El Dorado County mule ears	<i>Wyethia reticulata</i>
Red Hills soaproot	<i>Chlorogalum grandiflorum</i>

Four of the above species, Stebbins' morning glory, Pine Hill Ceanothus, El Dorado Bedstraw and Layne's butterweed are being proposed for Federal listing in 1993.

EIP Study Methodology

Through consultation of DFG's Natural Diversity Data Base, botanical survey reports, interviews with local botanists and field surveys conducted in the spring and summer of 1990 and 1991, likely habitat was narrowed down to 22 potential preserve sites. Ten were rejected due to existing development patterns. The 12 remaining sites were evaluated using a "Preserve Evaluation

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Form" developed by EIP Associates. Criteria evaluated included size of potential preserve, number of target species present, and condition of the site. These sites are shown on Exhibit C to the May, 1992 Staff Report.

DFG Recommendation

The acquisition of three large preserve sites and four to six smaller sites (400 acres) was originally recommended by DFG as follows:

1,400 acres - Salmon Falls area

700 acres - Pine Hill area

700 acres - Cameron Park

four to six 100-acre sites

Workshops were held in May and July of 1992 to present to the Board the findings of the EIP report and to elaborate on the various options available for establishing a preserve program. At the last workshop, the Board directed staff to return with a menu of options for developing a permanent preserve program. This staff report presents those options.

Staff Advisory Committee

At the second Board Workshop in July, the Board agreed to the formation of a Staff Advisory Committee consisting of a cross-section of agency staff, members of the development and environmental communities and private citizens. A list of Committee members is attached as Exhibit C.

The Committee has met on twelve occasions since that time. Based on input from the Committee and particularly the work of the subcommittees (most notably the one-called "Core Group"), a plan has been developed.

PRESERVE SITE LOCATIONS

After months of agonizing at the committee, subcommittee and staff level, the twelve preserve sites have been narrowed down to three main preserve areas: the Salmon Falls Preserve (1765 acres); the Pine Hill Preserve (700 acres) and the Cameron Park Preserve (450 acres). Two satellite areas have also been identified, consisting primarily of public land: Martel Creek (400 acres) and the BLM Site (185 acres, all BLM land). These sites are indicated on the exhibit map. (It should be noted that the acreage cited above are approximate).

Areas within the gabbro and serpentine soils area (the "Study Area") have been labeled with a "Special Soils Area" overlay. It is anticipated, with Board approval, that development within the Study Area would be governed by a set of policies.

Proposed preserve sites have been designated by "Important Biological Resources" or "Conservation Easement Area" overlays.

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The following is a description of the proposed preserve areas and strategies for their establishment.

A. Salmon Falls Preserve Area

Acreage Total: 1765
Existing public land 430
Private land required 1335

Goal: 1335 acres over and above the existing public lands.

Strategy: A preserve site could be established through the development of two projects in the Salmon Falls area, Kanaka Valley and Salmon Falls Hills. Kanaka Valley is a landholding of approximately 1490 acres. Although the project has not been formally submitted, the preliminary proposal is for approximately 270 units on 800 acres. Under this scenario, the 270 units would be clustered on 800 acres and the remaining acreage would be dedicated as preserve area. Additional preserve acreage via dedication would be available through development of Salmon Falls Hills, a preliminary proposal for 140 units on 700 acres. To achieve the 1335-acre goal, it is anticipated by the developers that an overall 5-acre density would be required. A development agreement between the parties is anticipated. No funding would be required with this strategy.

As shown on the exhibit map, an "Important Biological Resource" overlay has been placed on the map to mark the selected preserve area.

General Plan Discussion: The current General Plan designates the majority of the project area as low density (1 d.u./5-9.9 A) with the remaining designated as rural residential agricultural (1 d.u./10-160 acres). The preliminary 2010 General Plan currently proposes a rural residential designation, limiting parcels to a 20-acre minimum. The proposal, discussed under "Strategy" above, is not consistent with the General Plan. The land use designation will ultimately be evaluated against other environmental and resource constraints and against basic infrastructure capability.

B. Pine Hill Preserve Area

Acreage Total: 700
Existing public land 360
Private land required 340

Goal: 340 acres of private land.

Strategy: Establishment of a network of conservation easements in an area with a very high incidence of rare plant species (by purchase from willing sellers or donations). A "Conservation Easement Area" overlay has been placed on the map to designate this area. Conservation easements could be obtained on either developed or undeveloped properties, as funds become available or as such easements are received through donations.

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General Plan Discussion: The preliminary 2010 General Plan proposes land use designations of rural residential and low density. These designations would not conflict with the strategy outlined above.

C. Cameron Park Preserve Area

Acreage Total: 450

Goal: 450 acres, all of which is privately-owned land.

Strategy: Acquisition of the land: The "Important Biological Resource" designation has been placed on the map. The majority of the 450 acres is contained with one landholding (approximately 385 acres). If development projects are proposed on adjacent parcels (shown by dashed line on the exhibit map), the project proponent may choose to dedicate portions of properties through conservation easements to avoid impacts to plant populations. As these parcels are adjacent to a large core preserve area, it is an appropriate area to establish very small set asides. A funding mechanism(s) needs to be adopted by the Board of Supervisors to accomplish the stated goal. Purchase could be in the form of a lump sum (which could only be accomplished through large grants, large project mitigation or a revenue bond) or through installment payments using one or more funding sources (e.g., mitigation fees on development projects, parcel or sales taxes, or building permit fees). The site would be a likely candidate for a mitigation bank.

General Plan Discussion: The land use designation for this site is the same in the current General Plan and preliminary 2010 General Plan -- high density residential. Development into high density residential lots would be inconsistent with the proposal for a preserve site. If acquisition of this site is acceptable to the Board, the site may more appropriately be designated "Natural Resource." In considering this scenario, the Board may also wish to consider other possible constraints to development on this site such as topography, circulation, etc.

D. Martel Creek Satellite Preserve

Acreage Total: 400

Existing public land 200

Private land required 200

Goal: 200 acres of private land.

Strategy: Establishment of a network of conservation easements (as discussed under Pine Hill above). A "Conservation Easement Area" overlay has been placed on the privately-owned lands within this site.

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E. BLM Lands Adjacent to Site 8

Acreage Total: 185 (all public land)

Goal: Maintenance of 185 acres as preserve area

Strategy: None required.

FUNDING MECHANISM OPTIONS

Many funding options have been discussed over the past several months by the Staff Advisory Committee. Below are the options the Committee believes should be considered by the Board:

1. Fees

- a. County-wide parcel charge - A nominal fee could be placed yearly on the tax bill for all assessed parcels in the County. This type of fee would serve to spread the cost out in a wider area. It could be argued that additional open space in the form of preserve sites is a benefit to all County residents. However, this type of charge would be subject to voter approval.
- b. Development mitigation fees - A flat rate fee could be charged on all discretionary projects within the study area. These fees could be charged on a per dwelling unit basis. An additional surcharge could be added if plant populations are known to occur on the site.
- c. Building Permits - A flat rate could be charged for all building permits issued within the study area. Fees would only be paid if mitigation fees were not paid at the development stage.
- d. Sales Tax Increment - A small percentage could be added to the sales tax (e.g. 1/4 percent). This would further spread out the cost, as tourists already recreate in the County they too would enjoy the additional open space and, therefore, could contribute to the fund.
- e. Transient Occupancy Tax - An additional percentage of tax would also capture tourist dollars.

2. Other Revenue Sources

- a. Open Space Assessment District - Similar to a landscape and lighting district, these districts can fund the acquisition and management of open space. Once the district is formed, assessments are made against the property.
- b. Revenue bonds - These types of bonds would be paid back over time from a portion of the increase in the tax base from development within a specific reserve area or the gabbro-serpentine study area.

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3. Grants

Grants are possible from public agencies, foundations, corporations or private individuals or groups. The American River Land Trust is currently negotiating a contract with DFG to aggressively pursue grant opportunities. Funding for the preserve program is also being sought through a bond measure being sponsored by the Planning and Conservation League in 1994 (through the efforts of George Clark of the California Native Plant Society). Three million dollars for the El Dorado County program is being sought.

4. Public Land Exchanges

Land exchanges through such public agencies as BLM are a possibility. The Committee is still pursuing this option.

5. Public Agency/Utility Mitigation

Utility companies, such as PG&E and El Dorado Irrigation District and agencies such as Caltrans are at times required to buy land as mitigation for loss of habitat caused by projects. There may be a possibility of this occurring through projects being pursued by EID and the County Water Agency. Some of their proposed projects would involve placing pipelines and other infrastructure through known rare plant habitat areas.

6. Discretionary projects with potential impacts to fish, wildlife and habitat are subject to payment of fees under AB3158. Current fees are \$1250 on negative declarations and \$850 on environmental impact reports. Section 753.5(d)(1), Title 14 of the California Code of Regulations states that: "If a project may result in changes in resources listed in subsections (a) through (G), a presumption is made that there is a potential for an adverse effect on the resources. The listed resources include:

"(C) Rare and unique plant life and ecological communities dependent on plant life; and

(D) Listed threatened and endangered plants and animals and the habitat in which they are believed to reside.

It is suggested that at least a portion of this fee could be utilized by the Department of Fish and Game for purchase of preserve land in the County since the resources listed in subsections (C) and (D) are being affected.

MANAGEMENT/OPERATIONS AND MAINTENANCE

Management of the preserve areas could be performed by any one or more of several entities which the Committee has considered, as follows:

Public entities (DFG, BLM, etc.) - These agencies would most likely be involved through a Memorandum of Understanding in the management of public lands within the preserve sites. However, another possibility would be

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for DFG to take over the management of all preserve sites, with funding provided by the State.

2. Land Trusts/Conservation groups (e.g. American River Land Trust, Center for Natural Lands Management, etc.) - Fee title could be turned over to one of these groups and they would be charged with managing the site(s) (including operations and maintenance)
3. Private mitigation banking companies (e.g. Resource Management International, eMax, etc.) - At least two mitigation banking companies have expressed interest in starting banking companies in the County and have provided proposals to Staff. Long term management would most likely be turned over to a land trust. Normally a percentage of each dollar collected for banking credits would be applied to operations and maintenance of the preserves.
4. Private landowners/homeowners associations - This form of management could potentially function in the Salmon Falls Preserve Area. Through homeowners associations formed with the two development projects, property owners could pay a specified fee each year which would be earmarked towards managing the open space and preserves.

DISCUSSION

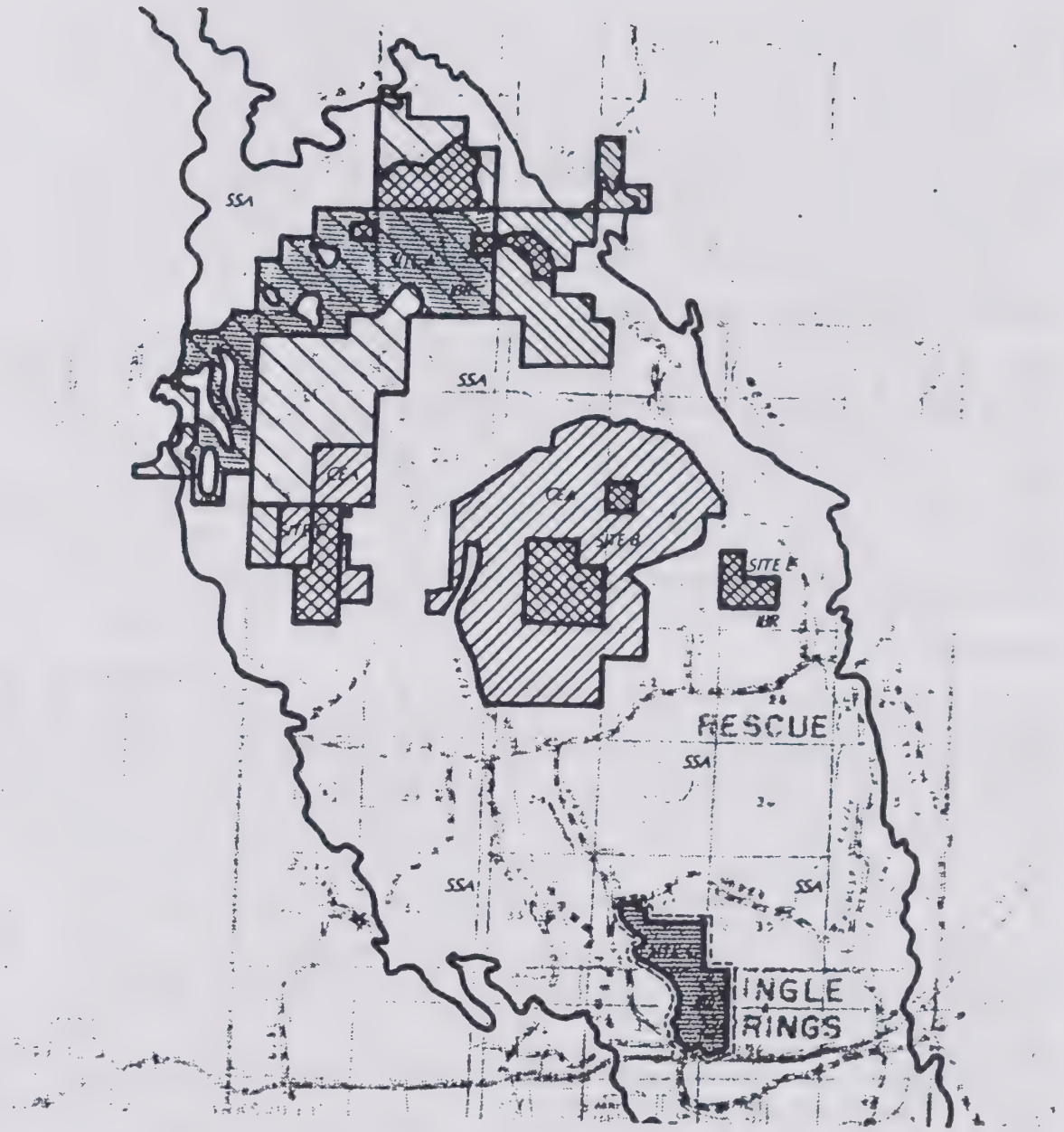
As discussed above, the Staff Advisory Committee and County staff have spent many long hours developing a plan acceptable to all facets of the community. A programmatic solution such as the one outlined above would appear to be the most workable plan. As was stressed in the last two workshops before the Board, failure to adopt some type of programmatic solution would result in continuing the "CEQA as usual" approach - a requirement for botanical studies for all discretionary projects, possibly preparation of environmental impact reports and the creation of a patchwork of small set asides which according to some researchers would not ensure the survival of the species.

Adoption of the program outlined herein or equivalent alternative policies would eliminate the requirement for separate botanical studies on a project-by-project basis and enable projects to proceed.

There are two other issues the Board may wish to consider at this point:

1. If the conceptual program is approved by the Board, what effect will it have on projects currently in process?
2. If the Board provides direction on preferred funding mechanisms, how will a study to analyze the feasibility of the mechanisms be funded?

SH:SV:jcb
Attchs.



NOT TO SCALE

 CABBRO SOILS

SSA SPECIAL SOILS AREA

CEA CONSERVATION EASEMENT AREA

 IMPORTANT BIOLOGICAL RESOURCES

PRESERVE AREA

(A) SALMON FALLS PRESERVE AREA

(B) PINE HILL PRESERVE AREA

(C) CAMERON PARK/ SHINGLE SPRINGS PRESERVE AREA

SATELLITE PRESERVE AREA

(D) MARTEL CREEK SATELLITE PRESERVE AREA

(E) ...



CAMERON PARK ACQUISITION AREA



CAMERON PARK AREA WITH POTENTIAL TO CONTRIBUTE ACREAGE TO PRESERVE THROUGH PROJECT DESIGN



PUBLIC LANDS NOT OCCUPIED BY RARE PLANTS



PUBLIC LANDS OCCUPIED BY RARE PLANTS



DENSITY TRANSFER AREA (1300 ACRES DEDICATED AS RARE PLANT PRESERVE WITHIN THIS AREA)



CONSERVATION EASEMENT AREA - NETWORK OF LANDS PROTECTED THROUGH SALES OR DONATIONS OF EASEMENTS TO WILLING PARTIES

STAFF REPORT

INTRODUCTION

The purpose of this workshop is purely educational. Many alternative solutions exist for dealing with the issue of sensitive plant species/habitat preservation. It is not staff's intention to present the entire possible range of alternatives to achieve this goal. There may be other alternatives available that have been utilized in other areas; the Board may prefer different solutions. This is merely an attempt to illustrate that the issue can be resolved through the cooperative efforts of County government, State agencies, community groups and development interest alike.

HISTORY

The presence of rare and endangered plants on the Western Slope of the County became an issue in 1989 when the Department of Fish and Game (DFG) advised the County that a population of endangered plants had been destroyed in Cameron Park. Since that time projects within the "Pine Hill Intrusion" area (gabbro and serpentine soils) have been reviewed for the presence of the designated species. In August of 1989, the developers of the Sunset Heights subdivision (Golden West) were advised of the presence of several of the sensitive plant species on their property. As a result of meetings between DFG, Golden West and County staff, Golden West elected to initiate a study to determine suitable locations for plant preserves. In the Spring of 1990 EIP Associates was hired to perform the study. After partial completion of the study, Golden West withdrew its funding (the Sunset Heights subdivision could not be processed due to the water emergency). In February of 1991 the Board of Supervisors approved a request to fund the completion of the plant study. The final document, Preserve Sites and Preservation Strategies for Rare Plant Species in Western El Dorado County (the "Plant Study") was completed in November of 1991.

PLANT STUDY

Purpose of Study

Resolution of the conflict between development and the protection of rare species and natural habitats were the primary purposes of initiating the Plant Study. Two primary goals were set forth in the report:

1. (To) protect, in perpetuity, populations of the subject rare plant species and representative examples of the habitats with which they are associated.

2. (To) provide an option for conducting off-site mitigation for the loss of rare plant populations that is more expedient and biologically valuable than the planning and review of individual plants for off-site mitigation.

To further these goals, the following objectives were proposed:

1. [To] identify and evaluate potential rare plant preserve sites.
2. [To] identify likely management needs of the rare plant preserves.
3. [To] identify options for funding and administering the acquisition and management of the rare plant preserves.

Methodology

EIP's first task was to identify previously unrecorded plant populations and potential preserve sites. Vegetation types were classified and mapped utilizing aerial photography. Known locations of plant populations were identified through the following sources:

1. The DFG's California Natural Diversity Data Base.
2. A 1986 masters thesis by James Wilson on plant species diversity and vegetation patterns in the vicinity of Pine Hill.
3. Survey reports by various environmental consultants.
4. Interviews with local botanists.
5. Field surveys conducted by EIP Associates during the spring and summer of 1990 and 1991. The surveys encompassed 1,500 acres of potential habitat in both gabbro and serpentine soils.

As a result of the above, 22 rare plant populations were identified. Ten were then rejected due to development on the property. The remaining 12 sites were then evaluated using a "Preserve Evaluation Form" developed by EIP in consultation with DFG, the California Native Plant Society and the Bureau of Land Management. Specific scored criteria included:

- number of target species present
- abundance of each target species present

- area of potential preserve
- distance from the boundary of the potential preserve to target species
- preserve shape
- condition of the site
- presence of managed natural areas near the site
- presence of rare plants on more than one soil type

Description of Plants/Habitat

The sensitive plant study area encompasses portions of the Shingle Springs, Cameron Park, Rescue and Salmon Falls areas (see Exhibit A). Five species of plants exist within the study area that have been listed as rare or endangered by the State of California. These species are as follows:

El Dorado bedstraw	<i>Galium californicum ssp. sierrae</i>
Layne's butterweed	<i>Senecio layneae</i>
Pine Hill ceanothus	<i>Ceanothus roderickii</i>
Pine Hill flannel bush	<i>Fremontodendron decumbens</i>
Stebbins' morning glory	<i>Calystegia stebbinsii</i>

Three additional species are also listed on CNPS's List 1B:

Bisbee Peak rush rose	<i>Helianthemum suffrutescens</i>
El Dorado County Mule Ears	<i>Wyethia reticulata</i>
Red Hills soaproot	<i>Chlorogalum grandiflorum</i>

All eight species are also Category 2 candidates for Federal listing.

LEGISLATIVE BACKGROUND OF PLANT LISTS

Lists of rare and endangered plants and animals were first developed following enactment of the 1970 California Species Preservation Act. DFG was assigned the task of developing criteria for rare and endangered species and reporting status information back to the Governor and Legislature every two years. In 1977 the California Native Plant Protection Act was enacted which charged

DFG with the protection and enhancement of native plant populations. This act was superseded in 1984 by the Endangered Species Act. Amongst the procedures set forth in the Act was a procedure for the listing of species. Specifically, the Act states that the Fish and Game Commission was required to adopt guidelines providing a process for interested parties (citizens or officials) to petition the Commission to list a species. The process and information required is described in the Act. With twelve months DFG must make a recommendation to the Commission concerning the potential listing. The Act also directed DFG to review the listed species every five years to determine if the listing is still warranted.

An inventory of rare species and natural communities called the Natural Diversity Data Base is also maintained by the State. Contained within the data base is status information on approximately one thousand species and 400 natural communities. The data base is not complete, however and includes information on surveyed areas only.

Sections of the Fish and Game Code define the rare, threatened and endangered designations used in the listings, as follows:

A native California plant (species, subspecies or variety) is rare when, although not presently threatened with extinction, it is in such small numbers throughout its range that it may become endangered if its present environment worsens (Fish and Game Code Section 1901)

A native California bird, mammal, fish, amphibian, reptile or plant (species or subspecies) is threatened when, although not presently threatened with extinction, it is likely to become an endangered species in the foreseeable future in the absence of special protection and management efforts.... (Fish and Game Code Section 2067).

A native California bird, mammal, fish, amphibian, reptile or plant (species or subspecies) is endangered when it is in serious danger of becoming extinct throughout all, or a significant portion of, its range due to one or more causes, including loss of habitat, change of habitat, over-exploitation, predation, competition or disease (Fish and Game Code Section 2062)

Federal listing is accomplished in much the same manner as State listing. Any individual can petition the Secretary of the Interior for listing. Upon acceptance by the Department, the species is designated a candidate species. If a species is listed, U.S. Fish and Wildlife Service must prepare a recovery plan. It is suggested in some of the literature that once a species is listed, development can be stopped or modified even if only the destruction

of a single individual would occur. Preparation of "Habitat Conservation Plans" may enable developments to proceed if "the developer pays to protect and manage some of the habitat for the endangered species without further jeopardizing its survival." (California's Wild Heritage, 1990 DFG)

All eight species have been identified on gabbro soil, in particular the Pine Hill gabbro intrusion occurring in the Shingle Springs/Cameron Park/Rescue/Salmon Falls area (see Exhibit B). Three of the species also occur on non-gabbro, mainly serpentine soils. Vegetation types within the study area are predominantly chaparral, oak woodland and grassland. The sensitive species are known to occur in chaparral and oak woodland habitats. Transition zones, known as ecotones also support the plants. Chaparral habitat in which the sensitive plants occur most often is dominated by a mixture of species rather than a single species. The oak woodland habitat in which the plants are found is dominated by either black oak (*Quercus keloggi*) or interior live oak (*Q. wislizenii*) with scattered digger pine (*Pinus sabiniana*).

Why Should Plants Be Preserved?

Two main justifications exist for protecting and preserving the sensitive plant species. First and foremost -- its the law. Under the California Environmental Quality Act (CEQA), Appendix G, a project would normally be considered to have a significant impact if it would substantially affect a rare or endangered species of animal or plant or the habitat of the species. Authority for mitigating impacts is found in Section 15040(a) of the CEQA Guidelines: "A lead agency for a project has authority to require changes in any or all activities involved in the project in order to lessen or avoid significant effects on the environment."

The California Endangered Species Act states that "it is the policy of the State to conserve, protect, restore, and enhance any endangered species or any threatened species and its habitat and that it is the intent of the Legislature, consistent with (conserving) the species, to acquire lands for habitat for these species."

Secondly, a wide range of socioeconomic benefits can be realized by preserving species diversity. A discussion of this topic is contained within the Plant Study. The benefits are also addressed in an article written by Jon Roush (1982), entitled "On Saving Diversity", as well as in numerous other articles. Three major arguments presented in the above article are:

1. Failure to preserve species can weaken natural systems. The dust bowl of the 1930s was cited as an example;

conditions were ripe for disaster when native prairie species were replaced by corn and grain.

2. There are benefits to preserving a single species. Agricultural crops are maintained by introducing the genetic variability of wild species into domestic varieties. Plants also have a wide variety of pharmaceutical uses; it has been estimated that over half of the medicine used today are of organic origin.
(Cite more examples)

3. There appears to be a human need for natural diversity.

A story appeared recently in the Sacramento Bee newspaper and on a national news show about a breakthrough in plant genetics. A particular species of plant, Arabidopsis thaliana was genetically engineered to produce a type of biodegradable polyester. New uses for plants come to light every year through scientific research.

There is no way of knowing at this point if any of the sensitive plant species within the gabbro soils possess any medicinal or industrial value or could contribute genetic variability to any agricultural concern. This is a strong argument for preservation of all species.

A strong argument for economic benefit is also presented in the Plant Study. Many people appear to have a preference for living close to open space and recreational areas. Access to sites with interpretive trails could make El Dorado County an even more attractive place to live and in turn increase land values within proximity to these sites.

DFG's 1990 Annual Report of the Status of California's State Listed Threatened and Endangered Plants and Animals reports that 74.6 percent of the State-listed plant populations are declining. The Report also quotes from another report prepared in 1987 at the direction of the California Senate Committee on Natural Resources and Wildlife, Sliding Toward Extinction (Jones and Stokes) which contained the following statements:

"[To]...inform the people of the State that biotic destruction is accelerating and may soon reach a crisis point. Decisive action is needed now to protect the habitats and species that are sliding toward extinction.

California's threatened and endangered species are indicators of the State's environmental health. The quality of natural habitats is ultimately tied to the health of all Californians.

Millions of acres of native grasslands, tidal marshes, vernal pools, oak and redwood forest have already been listed. In the pursuit of food, shelter, livelihood and pleasure, Californians have eliminated and altered a significant proportion of the State's wildlands.

The issue is how to balance the needs and activity of a rapidly increasing human population -- 33 million predicted by the year 200 -- with protection for the State's unique and exhaustible natural resources. Steps can be taken now to ensure that California's irreplaceable biological diversity survives in ways that sustain both the State's rich natural heritage and its economy. If we wait, conflicts will only accelerate."

While the preservation of the rare plants was the focus of the study, it is all part of crucial issue facing all of California -- the loss of habitat and in turn biological diversity.

Potential Preserve Sites

As discussed above, twelve potential preserve sites were identified. The preserve sites are delineated on USGS maps (see Exhibit C). Of the twelve sites evaluated, Sites 4 and 11 received the highest scores. Site 11 scored the highest primarily due to the fact that it is adjacent to and includes managed publicly owned lands (which also contain rare plants). Site 4 is considered important because rare plant populations have not been protected in the southern half of the study area. It is noted in the study that since all twelve sites contain rare plant populations, they all warrant consideration as preserve sites. The study further states that the County should consider establishing more than one preserve site. Justification for establishing more than one site is twofold: none of the potential sites contain all of the sensitive species and a greater degree of genetic diversity will be protected if the species are contained in more than one preserve.

DFG Recommendation

DFG has recommended that the County acquire three large preserve sites and four to six small sites, as follows:

1. 1,400 acre site in the vicinity of Salmon Falls
2. 700 acre site in the vicinity of Pine Hill
3. 700 acre site in Cameron Park

4. four to six 100 acre sites

A memorandum of DFG, dated March 16, 1992 (Exhibit D) explains their rationale for the number and size of recommended preserves.

ALTERNATIVES/IMPLEMENTATION STRATEGIES

Several alternatives for acquiring preserve sites are available to accomplish the goals set forth above. Another alternative is not to proceed. However, the effect of no action would result in a de facto "moratorium." As will be discussed at length below, numerous development projects have been on hold due to the water emergency. After the emergency is lifted, these projects may still remain on hold because adequate mitigation is not available to render impacts to plant populations to a less than significant level. Another alternative would be to find the potential disturbance/destruction of rare plant species a significant adverse impact and require that an EIR be prepared with the County required to issue a statement of overriding consideration. On-site mitigation could be required for each project and small, possibly unmanageable preserves would be created (preserves which Department of Fish and Game and California Native Plant Society argue may may not assure the survival of the species).

Recommendations for denial would be another method for processing projects with rare plant resources, citing unmitigated adverse impacts (per CEQA) and impacts to the rare plants per the Endangered Species Act. Not addressing the plant issue may result in legal action taken against the County by State agencies and/or community groups. In addition, not progressing toward a preserve program could result in some or all of the plants becoming Federally-listed. Involvement of the U.S. Fish and Wildlife Service and possibly the Environmental Protection Agency would add another layer of bureaucracy and potentially delay projects for a substantial period of time.

Mitigation Banking

Federal guidelines define mitigation banking as "habitat protection or improvement actions taken expressly for the purpose of compensating for unavoidable, necessary losses from specific future development actions" (456 FR 7644, U.S. Fish and Wildlife Service 1083). The "Mitigation Guidelines" developed by the California Native Plant Society (1984) describe mitigation banking as:

A large preserve or open space which individual developers buy into at a predetermined compensation ratio to satisfy their mitigation debt. Mitigation banking focuses mitigation efforts into significant amounts of habitat rather than permitting

establishment of many smaller and less significant or less defensible preserves or open space areas.

Ideally a mitigation bank works through developers either purchasing credits or paying fees into a particular fund to obtain preserve sites. As discussed in the Plant Study, fees could be collected from those pulling grading permits or proposing development within the study area. These fees would be utilized for acquisition and long term management of the preserves. An example of this occurred in Riverside County where mitigation fees were adopted to finance acquisition of habitat (See Exhibit E).

There are specific State acts which authorize mitigation banks for wetlands. This has been interpreted to apply to plant mitigation banks as well and many have been acquired in the State.

Ownership and management of the selected preserve sites could be accomplished in a variety of ways under the mitigation banking alternative. The bank could be owned and operated by the County, a private group, a cooperative (County and private interests) or a Land Trust. Advantages and disadvantages of each type are detailed at length in the Plant Study and are summarized below.

County-Owned Mitigation Bank

This type of bank would be owned, operated and managed by the County. Development and operation of the bank would be accomplished by selling credits. The primary advantage would be the County's ability to exert control of existing land uses and the fair allocation of mitigation bank credits. The high cost of establishing the bank (which would be initially taxpayer funded) was cited as the primary disadvantage, along with the high cost of development, operations and maintenance (DO&M).

Privately-Owned Mitigation Bank

Ownership by individual development interests, partnerships or third parties would characterize this type of mitigation bank. The private sector would bear the entire cost of DO&M. The primary advantage cited in the Plant Study is that the entire financial obligations would rest on the private sector. It was also stated a third party might also have more time available than County staff to oversee the bank. The primary disadvantage stated is the cost of ensuring long term DO&M, which may require a large endowment to fund. Further, it is stated that this type of bank may lead to "competition and favoritism among developers, inflated prices, and possibly

land purchase on speculation for later sale to the mitigation bank."

Cooperative Mitigation Bank

In this type of Bank, fee title to this type of bank would be held by the public sector and funding would be the responsibility of the private sector or third party agents. DO&M costs would be included in the price of bank credits. The Plant Study states that the main advantage of this type of bank is that it combines the advantages of the county-owned and privately-owned mitigation banks. Negative aspects were stated as being the position of developers that the County is obligated to let them to use the credits for their projects, even if it is not considered appropriate and that the County may not have the interest or expertise for long term DO&M.

An example of this type of mitigation bank is at Springtown, near Livermore, California. Springtown is a wetlands habitat supporting a State and Federally-listed plant. Those proposing development within the area that are required to mitigate for wetlands impacts (and are approved by DFG), deposit funds to be utilized in the purchase and restoration of Springtown. Wetland X (the Wetland Exchange Company of California) acts as the bank; eventually the property will be donated to DFG.

Land Trust Mitigation Bank

As the name implies, this type of bank would be owned, operated and maintained by a land trust or other quasi-public agency. Initial acquisition would be funded by private interests and then fee title relinquished to the land trust. The primary stated advantage is the public sector would be relieved of the financial burden of purchasing and creating the bank. A stated disadvantage would be the inability to find a land trust interested in assuming this role.

Transfer of Development Rights

The concept of Transfers of Development Rights (TDRs) has been in existence for over twenty years, but has not been implemented in many areas. In basic terms, certain rights are taken from one piece of property and transferred to another. The most common method is the transfer of the development rights on a "sending site" to another site or "receiving site." Exhibit F illustrates the concept: A potential rare plant preserve has been identified as a sending site. Other areas of the County have been designated as receiving sites, site which can accommodate a higher density than the general plan would normally allow. The property owner of the sending site thereby relinquishes any development rights and can grant

a conservation easement (retaining ownership of the property and keeping it on the tax rolls) or he can grant fee title to an agency or land trust. TDRs can be traded through the private market or a government-controlled market.

A document recently prepared for the California Division of Forestry and Fire Protection, Planning Habitat Protection in California: State Policies and County Actions to Implement CEQA Through Improved General Plan addresses an issue peculiar to California: an insistence that all homes must be single family detached with private yards. The document further states that: "For successful markets to be created in TDR programs, there must first be public understanding of the value of higher-density development in some areas to protect open space and resources in others."

The most significant court case to date dealing with the TDR concept was heard by the U.S. Supreme Court, Penn Central Transportation v. City of New York. The issue of "taking" was the foremost issue addressed by the high court. A New York City landowner sought a permit to construct a 55 floor office building over the historic Grand Central Station. The application was denied by the New York City Planning Commission on the grounds that the Station was an historic site. The developers, however, were given certain development rights to compensation for the right to develop. This was viewed as a "taking" by the developers who proceeded to file suit against the City. The case wound its ways up to the U.S. Supreme Court and the Court ruled that the City's TDR program did not constitute a taking and affirmed the use of TDR's.

In an American Planning Association paper published in 1987 (Transferable Development Rights Programs, Planning Advisory Service Report No. 401), several case studies were presented on successful TDR programs. One successful program was developed in Montgomery County, Maryland to protect agricultural land. After consideration of downzoning, purchase of agricultural land and a TAR program, a TDR program was chosen. The County's program is very similar to that described above. Property owners in the designated "Rural Density Transfer Zone" are allowed to sell one development right per five acres of farmland. Approval of individual TDRS was accomplished through the development review process at the County's Planning Department. As of 1987, 35 to 50 receiving sites have been established and approximately 20,000 acres of farmland protected. The success of the TDR program has been attributed to the following factors:

1. Sufficient restrictions on sending areas to give rise to TDR sales.

2. Designation of receiving sites with infrastructure capability and sufficient development demand to make additional density increases attractive to developers.
3. Recognition of the economic and financial conditions that underpin a TDR market and determine the value of TDRs to both sellers and buyers.
4. A TDR program design that is simple and understandable and that does not require complex approvals.
5. Commitment to an educational effort to inform landowners, developers, Realtors, and attorneys about the program."

Sacramento County has also adopted a TDR program through its new general plan.

Management of the preserves, once they are established through a TDR program, may pose a problem. Some type of funding mechanism would need to be established for long term operations and maintenance, perhaps a mitigation fee as discussed previously.

Open Space Districts

Open space districts are another alternative for preservation. As is detailed below in the discussion of programs in other jurisdictions, open space districts are generally funded through an voter-approved tax structure and can serve to protect a wide range of resources and provide recreational opportunities.

Outside Funding Sources

Other funding sources are described in the Plant Study, including land purchases by the Wildlife Conservation Board, Bureau of Land Management (BLM) and funding through the Public Resources Account Fund and Environmental License Plate Fund. Research into these sources, however, has shown that funds may not be available at the present time. A program could also be set up for acceptance of gifts of property or conservation easements.

Interim Protection Measures

In an attempt to ascertain the need for interim protection for the plant populations, an analysis was made of development and building permit activity within the defined study area. These data were also analyzed to ascertain the viability of the proposed preserve sites and will be presented at the workshop.

Interim protection measures are described briefly in the Plant Study:

Management Agreements are contracts between landowners and other parties (County, a land trust, etc.) which would require the landowner to manage their land in a specified way for a certain time period. Some compensation to the landowner would be required. It is noted in the study that this method would be effective if the landowner exhibited personal stewardship.

Leases would involve the renting of property by a party (e.g. County) for the express purpose of maintaining control over its use.

A Right of First Refusal is described as an agreement to provide another party with a first option to purchase if any offer is received from another party to buy the property. The one drawback noted in the report is that funds would need to be available to purchase the property on short notice.

Other methods could be utilized, including placing projects within potential preserve sites "on hold" until long term measures are adopted and not accepting any new applications for processing within the plant study area.

Another protection method (both long and short term) is discussed in a study conducted for the County of Sonoma ("Santa Rosa Plains Endangered Plant Protection Report"). A Rare Plant Registry was proposed whereby a property owner could voluntarily protect their land. The Nature Conservancy also has such a program. Participants in the program are required to agree to management of the property "for the benefit of its natural values" and to advise the Nature Conservancy before selling or developing the land. The Nature Conservancy in turn offers the following for property owners participating in the program:

- a survey to check on the 'health' of the endangered plant
- preparation of a management plan
- consultation upon change of ownership or other change
- a plaque or framed certificate honoring the owner's commitment to protect the land

A program such as this could be utilized in El Dorado County, either County-run or possibly through The Nature Conservancy.

LONG-TERM PROTECTION

Two methods for long term protection are discussed in the Plant Study, Acquisition of Fee Title and Conservation Easements.

Acquisition of Fee Title involves both the purchase of the property and all allowable rights on the property. Mitigation banking is tied into this form of protection.

Conservation Easements frequently involve the selling of development rights by a property owner to protect the resources on the property. This form of protection is tied into the TAR concept discussed above.

GENERAL PLAN UPDATE

An important component of the establishment of preserve sites would be the coordination with and incorporation into the update of the County's General Plan. Ideally, such acquisition of preserve sites could satisfy both open space and recreational needs being addressed in the Plan. Recreational needs might be addressed by providing interpretive hiking trails through the sites, which would fill an educational need as well. A possibility exists for establishing corridors linking the sites. As discussed in the Plant Study, corridors between preserve with have been shown to be effective in allowing migration of species between sites.

MANAGEMENT TECHNIQUES

Management of the vegetation with the sites is discussed at length in the Plan Study. A number of references cites in the Study suggested that the sensitive species may be enhanced through disturbance by mechanical means or fire. A study conducted at DFG's Pine Hill site indicated that both Pine Hill Flannelbush and Pine Hill Ceanothus appear to benefit from fire. CDF currently has a prescribed burn program for vegetation management which it will use for both private landowners or public agencies. It was indicated by staff at CDF that as a result of a prescribed burn conducted within the past few years on public land, the population of morning glories increased (Jim Smith 1992, personal communication). This type of management would not be available on small acreage parcels.

Transplantation is also mentioned as a possible management technique, but due to the lack of success of these programs, DFG discourages this method.

An integral part of management of the preserves would be a monitoring plant. Information in the monitoring plan should include information contained in the DFG Mitigation Plan (Appendix E of the Plant Study).

SUCCESS OF OTHER PLANT PRESERVE PROGRAMS

Open space districts and preserve sites have been established in a number of areas of California. Below is a description of some of these sites.

Marin County

An open space district was established as a tax supported public agency in 1972 by a general election. The District currently manages 6,000 acres within 20 open space preserves. Besides being managed to preserve the natural environment, the preserves are available for a variety of public recreational uses: hiking, biking, horseback riding, picnicking, birdwatching, etc.

Mid-Peninsula Regional Open Space District

An open space district was also established by voters in 1972 in northwest Santa Clara County. The District has acquired 35,000 acres within 25 preserves.

Mad River Slough and Dunes Cooperative Management Area

This area is located north of the City of Arcata. A cooperative efforts for management of the Mad River Preserve includes participation by The Nature Conservancy, BLM, Louisiana-Pacific Corp. and the Redwood Gun Club. These groups banded together to provide protection of valuable resources (dunes, sloughs, forests, and marshes and to provide public access.

Santa Barbara County

Due to offshore oil development within the coastal zone of the County, large areas of sensitive coastal habitat were set aside as mitigation. Additional lands were acquired through the settlement of a lawsuit. The County is presently, however, struggling to secure funding to manage these areas.

Springtown Wetland Reserve

The reserve was established to protect a rare plant species listed as endangered by DFG and USFWS. A mitigation bank was created to allow development in outlying areas where the plant exists and to provide funding for restoration work within the reserve. After completing the restoration, the reserve will be turned over to DFG.

Santa Rosa Plateau

Another cooperative effort occurred in Riverside County with the acquisition of the Santa Rosa Plateau. The site was purchased from a developer with funds provided by the Metropolitan Water District (as mitigation for a proposed reservoir), Riverside County, State

bond money and The Nature Conservancy. The Plateau hosts approximately 50 threatened plant and animal species and contains a variety of habitats including vernal pools.

SUMMARY OF COMMENTS, APRIL 27 MEETING

A meeting was conducted by County staff on April 27, 1992 to present an overview of this workshop. An attempt was made to invite a cross-section of development and building interests, agencies and community groups.

The most prevalent issue brought up at the meeting was: who is going to pay for the preserve sites? If the mitigation banking method is chosen, will a fee be assessed on all property owners within the County; the Study Area, or only on those developing property within the study area? Staff was unable to answer at this time since a preservation option has not been chosen.

A concern was also expressed about the possible "taking" of property. Several agency staff members stated that this was definitely not the intent; property would be acquired by purchase at fair market value or through a TDR program.

Also the issue of the confidential appendices in the Plant Study was brought up. This issue has since been resolved. Additionally, a statement was made that development did not cause the problem.

Another concern expressed by many was the length of time required to go through this process. Did additional studies need to be conducted? If the study is to be tied into the General Plan, how long would it take?

A question was asked of DFG if they accepted the content of the study. DFG staff replied that they had some concerns, but did accept the study. They considered the study as a first step toward a programmatic solution to the plant issue.

The issue of wetlands was also brought up and it was explained by County staff that a comprehensive study had not been done, but the subject would be touched upon at the May 11 workshop.

A question was also asked of DFG staff as to what criteria were used for selecting sites and what DFG's recommendations were in terms of number and location of sites. This information is available in the Plant Study and Exhibit D of this report.

Concerns were raised about the locations of some of the potential preserves, in close proximity to high density development and an airport. DFG staff stated that some of the sites did score low on the evaluation forms. Some concern was noted about whether DFG was being unrealistic in terms of the amount of acreage requested.

More thorough explanations of mitigation banks and TDR programs were also requested. They are provided in this report.

What would occur if a project within the plant study area was submitted today? Could a separate study be prepared and a mitigation plan presented to and approved by the Board of Supervisors. County staff stated that this could be done, if the plan was also approved by DFG.

Statements were made that the development community should get involved in implementing the Study.

Interest was also expressed in seeing examples of similar programs implemented in other jurisdictions and their rate of success.

A request was made for a map depicting the plant study area over the current land use and zoning maps. County staff consulted with the County draftsman and it was indicated that this could not be done at the present time. It was noted that parcel specific maps of the preserves could be provided later in the process.

WHERE DO WE GO FROM HERE?

As stated above, the primary focus of this workshop is educational in nature. It is suggested that the following steps be taken to further the goals and objectives of the Plant Study:

1. Schedule one or more facilitated public workshops to solicit input from the community at large.
2. Release a request for proposals to qualified consultants to prepare a fiscal analysis of the various alternatives for accomplishing the stated goals.
3. Schedule a public hearing before the Board of Supervisors to obtain the following policy decisions:
 - a. Choice of preserve sites
 - b. Preferred method of acquisition, funding and long term management.

WETLANDS ISSUES

Endangered plant species will be one of a number of proposed open space programs that will be reviewed by the County in the next several years. Concerns have already been raised on wetland habitat that is that is interspersed throughout El Dorado County along with riparian contours and recreational needs. It is anticipated that the approach used in developing the plant policy will be used in addressing other County policies in developing other County open space policies.

General Map of Study Area
El Dorado County
Rare Plant Preserves



- Gabbro Soil Study Area



- Serpentine Soil Study Area

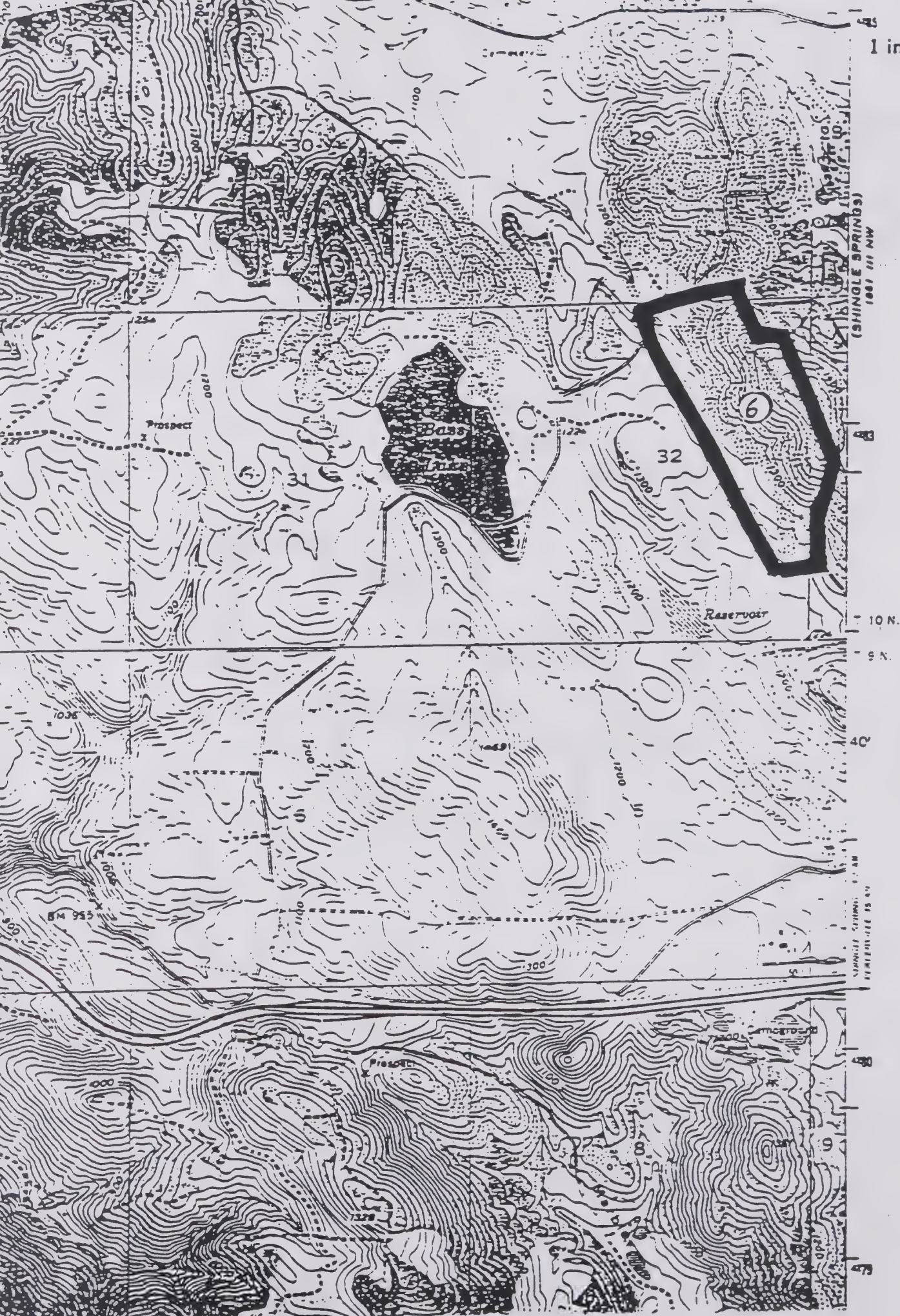


SPECIAL STATUS PLANT SPECIES ASSOCIATED WITH
GABBRO SOIL IN WESTERN EL DORADO COUNTY

Species	Status ^a	Known	Habitat
	State/Federal/CNPS	Geographic Range	Associations
<i>Calystegia stebbinsii</i> Stebbins' morning glory	E/C2/IB	Foothills of El Dorado County. Also Grass Valley in Nevada County.	Sparsely vegetated areas on gabbro soils in El Dorado County. On serpentine soil in Nevada County.
<i>Ceanothus roderickii</i> Pine Hill ceanothus	R/C2/IB	Foothills of in El Dorado County.	Open chaparral slopes and disturbed chaparral openings on rocky, gabbro soil.
<i>Chlorogalum grandiflorum</i> Red Hills soaproot	--/C2/IB	Foothills of Tuolumne and El Dorado County.	Open rocky slopes on serpentine and gabbro soils.
<i>Fremontodendron decumbens</i> Pine Hill flannel bush	R/C2/IB	Pine Hill area of El Dorado County.	Chaparral and forest openings on gabbro soils.
<i>Galium californicum</i> subsp. <i>sierrae</i> El Dorado bedstraw	R/C2/IB	Foothills of El Dorado County.	Shaded, north-facing slopes in live oak or black oak dominated forests on gabbro soils.
<i>Helianthemum suffrutescens</i> Hibee Peak rush rose	--/C2/IB	Foothills of Amador, Calaveras, and El Dorado County.	Chaparral, gabbro, and serpentine soils.
<i>Senecio layneae</i> Layne's butterweed	R/C2/IB	Foothills of El Dorado County. Possibly Red Hills in Tuolumne County.	Open slopes in chaparral, oak woodland, and pine forests below 3,000 feet on serpentine and gabbro soils.
<i>Wyethia reticulata</i> El Dorado County mule ears	--/C2/IB	Foothills of El Dorado County.	Shaded or open slopes in chaparral, oak woodlands, and pine forests on gabbro soils.

- State = California Department of Fish and Game (1985).
 E = Listed as "Endangered" under the State Endangered Species Act (1986).
 R = Listed as "Rare" under the State Endangered Species Act (1986).
 Federal = U.S. Fish and Wildlife Service (50 Federal Register 39526-39584, September 27, 1985).
 C2 = A "Candidate" species under review for Federal listing. "Category 2" includes species for which the USFWS presently has some information indicating that "proposing to list them as endangered or threatened species is possibly appropriate", but for which further biological research and field study is usually needed to determine biological vulnerability and threats. Note: "Category 2" species are not necessarily less rare or less threatened than "Category 1" species. The distinction relates to the amount of data available and is therefore administrative rather than biological.
 CNPS = California Native Plant Society (Smith and Herg, 1988).
 IB = Considered rare or endangered in California and elsewhere, if present outside California (probably meets criteria for State listing).

1 inch = 2000



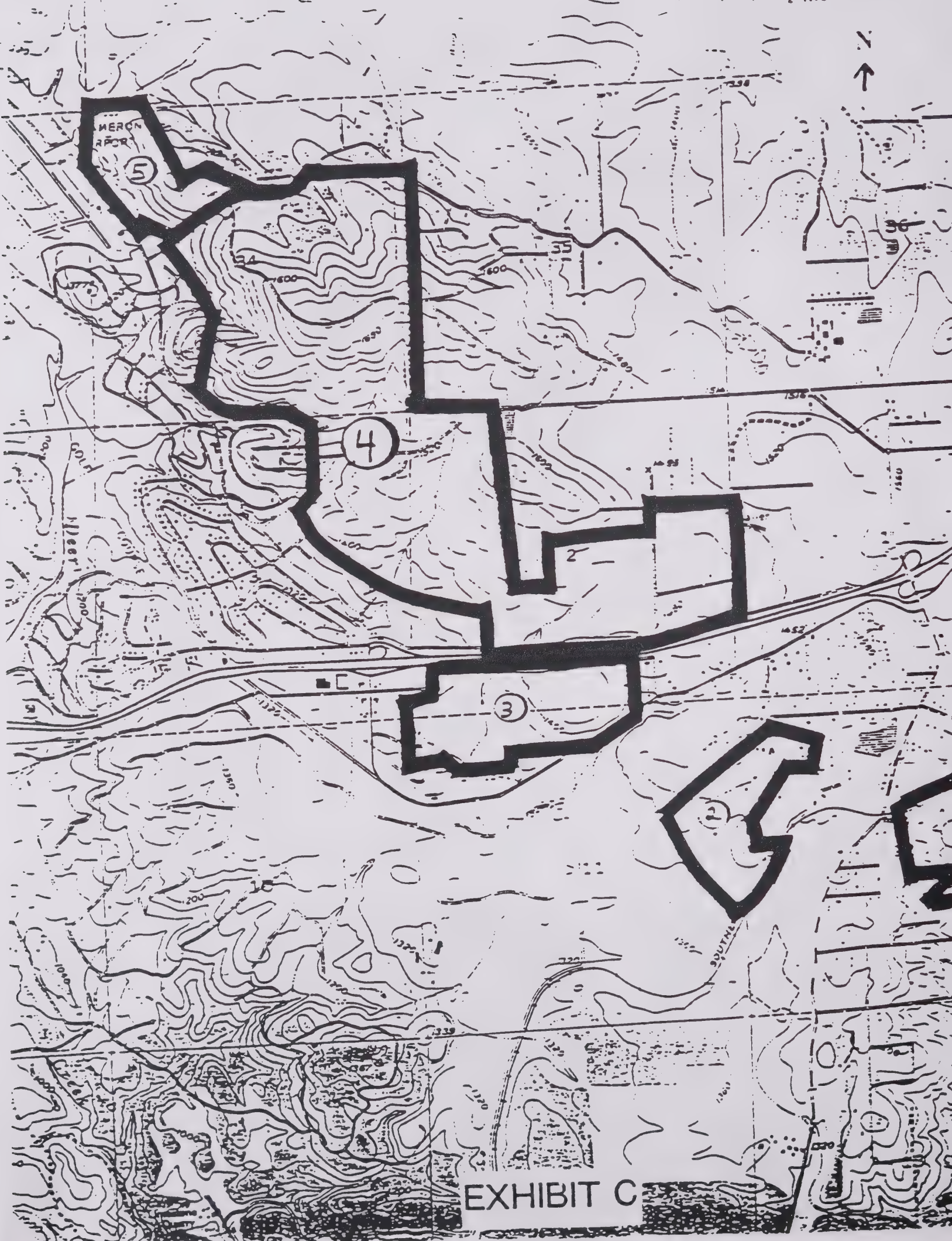
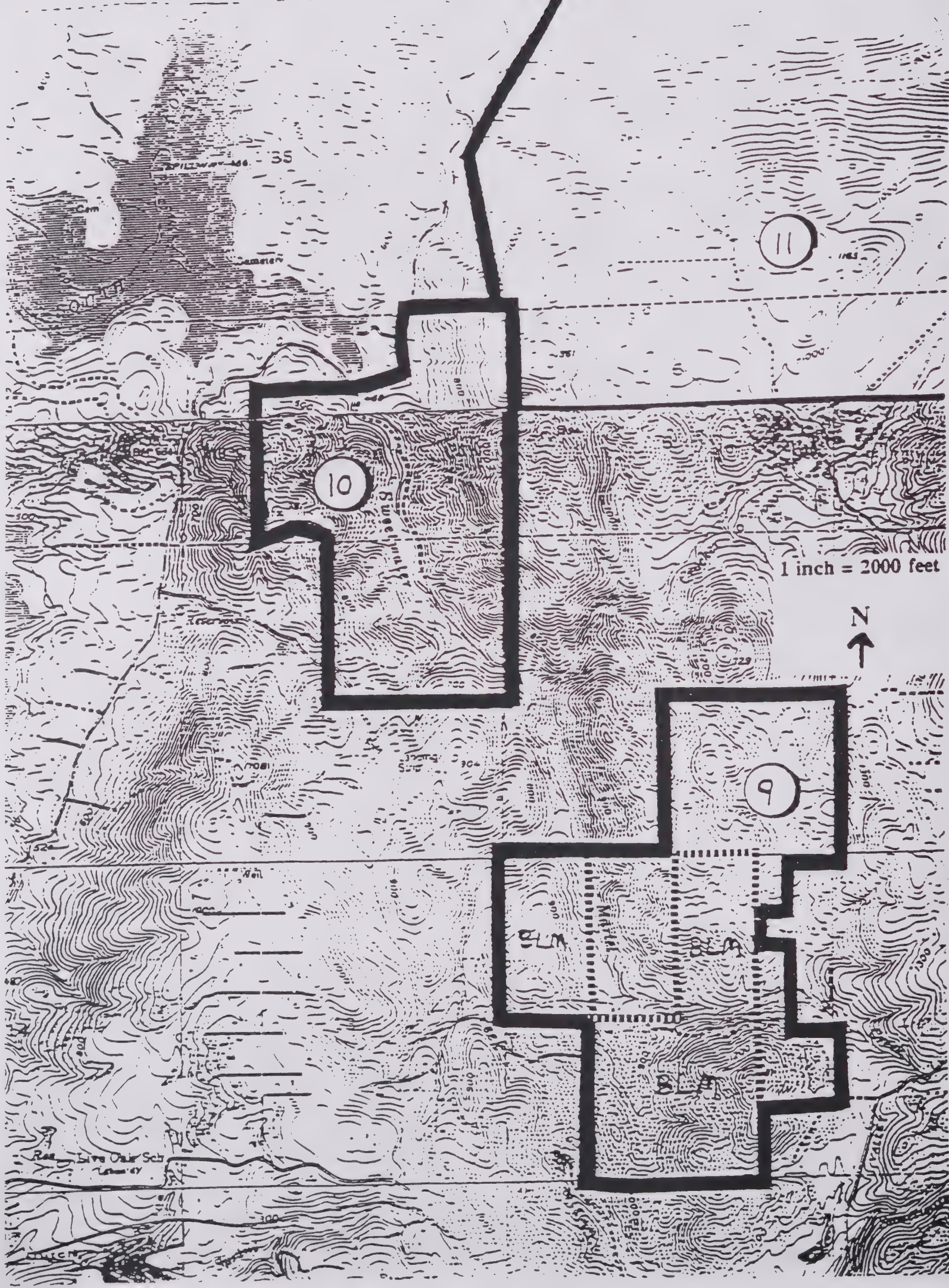
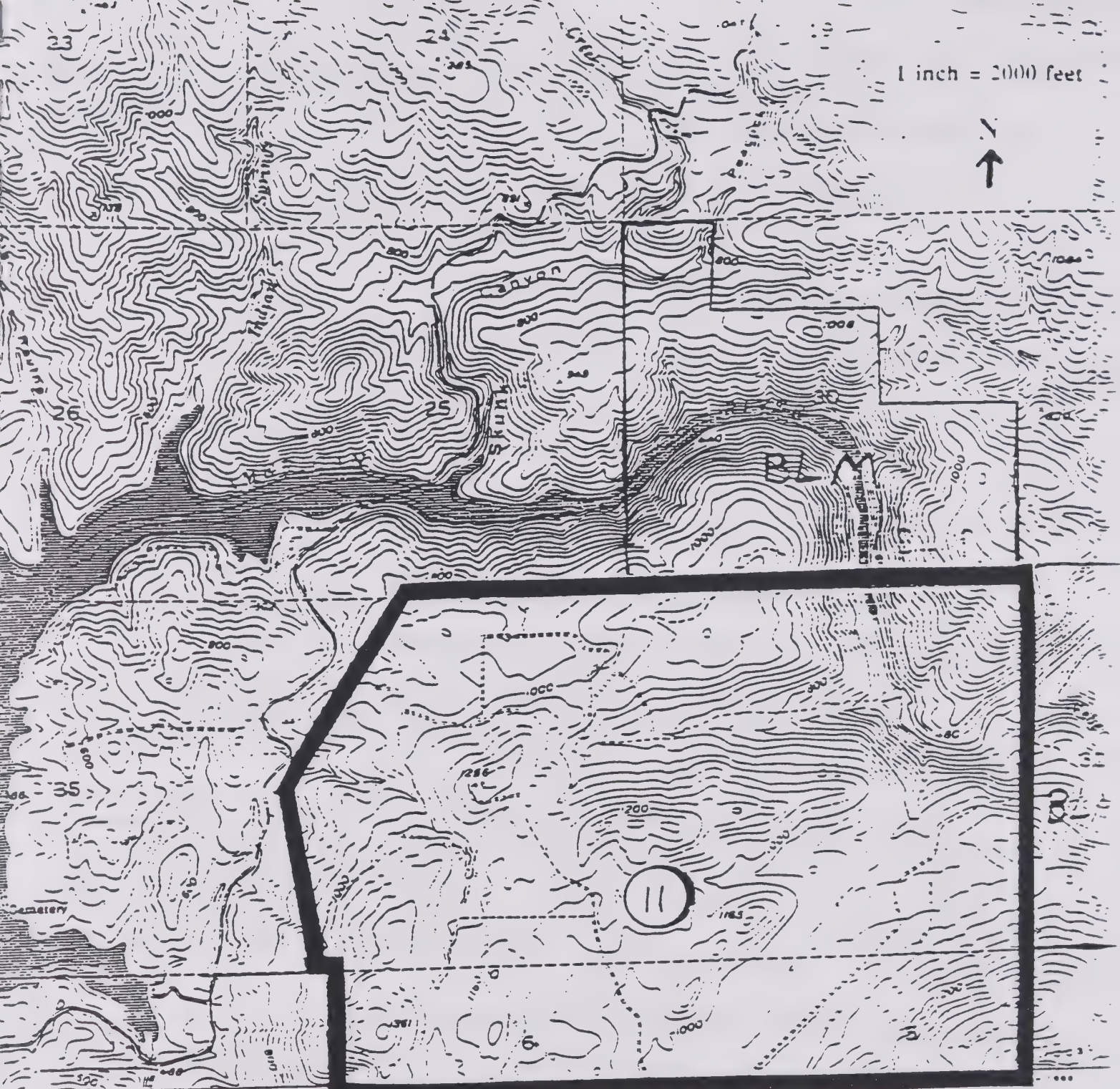


EXHIBIT C



1 inch = 2000 feet



SOM 9.4 MI.
RAMENTO 31 MI.

R. 8 E. 2130"

673000m E

ROAD CLASSIFICATION

Medium-duty _____ Light-duty _____

Unimproved dirt

○ State Route



QUADRANGLE LOCATION

STANDARDS
S. OR. RESTON, VIRGINIA 22092
AVAILABLE ON REQUEST

Revisions shown in purple compiled from aerial photographs
taken 1973. This information not field checked
Map photorevised 1978
No major cultural or drainage changes observed

PILOT HILL, CALIF.
SE 1/4 AUBURN 15' QUADRA
38121-31-TF-324
PHOTOINSPECTED
1954
PHOTOREVISED 1978
DMA 1761 1 SE-SERIES

Memorandum

To : To: Meeting Participants

Date : March 16, 1992

From : Department of Fish and Game - Region 2

Subject: Preserves For Rare Plants In El Dorado County

RECOMMENDATIONS:

- 1) a 1400 acre preserve in the vicinity of Salmon Falls
- 2) a 700 acre preserve in the vicinity of Pine Hill
- 3) a 700 acre preserve in Cameron Park
- 4) four to six 100 acre preserves, depending on the number of rare plant species represented at these smaller sites

RATIONALE FOR RECOMMENDATIONS ON THE NUMBER OF PRESERVES

Three primary preserves and four to six secondary preserves are recommended to insure that at least several populations of each rare species are protected. No single potential preserve site contains all of the rare plants.

Multiple preserve sites are necessary for several additional reasons. If a natural or human-caused event severely damages or eliminates a species on one preserve, hopefully, populations will be protected on other preserves. It is also likely that a greater degree of genetic diversity will be protected within each of the rare species. Finally, the multiple preserves will protect the range of habitat types with which the rare plants are associated.

RATIONALE FOR RECOMMENDATIONS ON PRESERVE SIZE

- 1) Larger preserves are likely to include a greater number of the target species and a greater number of individuals of these species.
- 2) Populations on small preserves are more vulnerable to natural disasters and vandalism. In a large preserve, there is a better opportunity for members of the target species to survive and repopulate the site.

3) Deleterious genes which may be "swamped out" by out-crossing within a large population, may have a severe impact on small isolated populations.

4) Large, more broadly-shaped preserves have a low preserve edge to area ratio. More of the preserve's area is far from the border. Rare plants near the borders are more likely to be subject to damage by trespassers, competition from invasive, nonnative plants, irrigation and stormwater runoff, and potentially a different set of herbivores and pollinators than the set that they are adapted to.

5) Larger preserves may also provide more opportunities for habitat enhancement, such as the use of controlled burns.

RATIONALE FOR RECOMMENDATIONS ON THE LOCATIONS OF THE PRESERVES:

The main body of the gabbro-soil intrusion creates a long, oval shaped area extending from Cameron Park/Shingle Springs to about two miles north of Salmon Falls. Several of the rare species are restricted to this area and are represented by scattered, highly disjunct populations.

Cameron park, Pine Hill and Salmon Falls each contain large undeveloped sites with a high diversity and abundance of the rare plants. Including a large preserve in each of these areas insures the protection of populations which represent most of the range of the target species.

Julie Horenstein
Plant Ecologist

JH:ccb

AN ORDINANCE OF THE COUNTY OF RIVERSIDE
ESTABLISHING A DEVELOPMENT MITIGATION
FEE FOR RESIDENTIAL DEVELOPMENT

5-17-71 AM 10:43
RECEIVED
PLANNING DEPARTMENT

The Board of Supervisors of the County of Riverside Ordains as
Follows:

Section 1. TITLE. This ordinance shall be known as the
Development Mitigation Fee Ordinance.

Section 2. FINDINGS. The Board of Supervisors finds and
determines that:

- a. In order to implement the policies, goals and objectives of the Riverside County Comprehensive General Plan, and to mitigate the impacts caused by new residential development in the County, certain public facilities must be constructed or acquired; wildlife, vegetation and their habitats must be preserved; and regional parkland and recreational trails must be acquired.
- b. A Development Mitigation Fee is needed in order to supplement the financing of these public facilities and to pay for the development's fair share of their cost.
- c. The Development Mitigation Fee set forth herein does not reflect the entire cost of providing the facilities required in order to effectively meet the needs created by new residential development. Additional revenues will be required from other sources. The Board finds that the benefit to each residential unit is greater than the amount of the Fee to be paid by that residential unit.
- d. The Development Mitigation Fees collected pursuant to this ordinance shall be used toward the construction and acquisition of the public facilities identified in the Public Facilities Needs Report, the purchase of regional parkland and the preservation of habitat and open space.
- e. The cost estimates set forth in the Public Facilities Needs Report are reasonable cost estimates for constructing these facilities, and that portion of the fees expected to be generated by new residential development will not exceed the total fair share of these costs.
- f. The public facilities component of the Development Mitigation Fee has been determined by dividing the total estimated fair share of costs for constructing, improving or acquiring the required facilities by the estimated number of residential units to be constructed in the unincorporated area of the County through the year 2000. The facilities to be financed in part by the Development Mitigation Fee will benefit the properties subject to the Fee.
- g. Existing communications facilities are inadequate and lacking in capacity for the anticipated residential development in the County. It is therefore necessary, in furtherance of the public health, safety and general welfare, to impose a Fee to provide for new residential development's fair share contribution toward the implementation of the communication facilities set forth in the Public Facilities Needs Report. As more fully described in the County's "Five Year Communications Plan," there is a direct correlation between population growth, the number of county personnel required and the need for communication facilities. Thus, a reasonable relationship exists between the need for the communication facilities and the impacts of residential development as well as between the Fee's use and the residential development upon which Fee will be imposed.

- h. The Riverside General Hospital currently lacks capacity to efficiently, effectively, humanely and safely provide health care services to its patients. It is therefore necessary, in furtherance of the public health, safety and general welfare, to impose a Fee to provide for new residential development's fair share contribution toward the construction of a new hospital complex set forth in the Public Facilities Needs Report. As more fully described in the "Riverside General Hospital Replacement Facility Functional and Space Program," population growth is one of the most significant factors contributing to the demand for health care services. Thus, a reasonable relationship exists between the need for the hospital complex and the impacts of residential development as well as between the Fee's use and the residential development upon which the Fee will be imposed.
- i. Other existing health service facilities are also inadequate and lack the capacity to provide health care for anticipated residential development in the County. Population growth has a direct impact upon the quality and adequacy of health care. It is therefore necessary, in furtherance of the public health, safety and general welfare, to impose a Fee to provide for new residential development's fair share contribution to the construction of the health facilities identified in the Public Facilities Needs Report. Said facilities are also recognized by and are consistent with the Public Facilities and Services Element of the General Plan. Thus, a reasonable relationship exists between the need for health service facilities and the impacts of residential development as well as between the Fee's use and the residential development upon which the Fee will be imposed.
- j. Existing library facilities are inadequate and lack the capacity to provide educational services consistent with community needs for anticipated residential development in the County. Population growth directly causes a need to expand the number of facilities within the County Library System. It is therefore necessary, in furtherance of the public health, safety and general welfare, to impose a Fee to provide for new residential development's fair share contribution toward the construction of the library facilities set forth in the Public Facilities Needs Report. Said facilities are recognized by and are consistent with the Public Facilities and Services Element of its General Plan. Thus, a reasonable relationship exists between the need for the library facilities and the impacts of residential development as well as between the Fee's use and the residential development upon which the Fee will be imposed.
- k. Existing mental health facilities are inadequate and lack capacity to provide mental health care services necessary to accommodate anticipated residential development in the County. There is a direct correlation between population growth and the need for additional clinics and treatment facilities. It is therefore necessary, in furtherance of the public health, safety and general welfare, to impose a Fee to provide for new residential development's fair share contribution toward the construction of the mental health facilities set forth in the Public Facilities Needs Report. Said facilities are recognized by and are consistent with the Public Facilities and Services Element of the General Plan. Thus, a reasonable relationship exists between the need for mental health facilities and the impacts of residential development as well as between the Fee's use and the residential development upon which the Fee will be imposed.

1. In assessing the future need for regional park facilities, the County utilizes the standard of one developed acre per thousand population and twenty-five acres natural park acreage per thousand population. Existing park facilities and recreational trails are inadequate to provide recreational areas necessary to accommodate anticipated residential development in the County. It is therefore necessary, in furtherance of the public health, safety and general welfare, to impose a Fee to provide for new residential development's fair share contribution toward the acquisition and improvement of the park facilities set forth in the Public Facilities Needs Report. Said facilities are recognized by and are consistent with the Environmental Hazards and Resources Element and the Public Facilities and Services Element of the General Plan. Thus, a reasonable relationship exists between the need for park facilities and recreational trails and the impacts of residential development as well as between the Fee's use and the residential development upon which the Fee will be imposed.
- m. The California Youth Authority sets minimum space requirement standards for juvenile detention facilities. Existing facilities are inadequate and lack the capacity to accommodate future population growth resulting from anticipated residential development in the County. Approximately six children per thousand population are served by these county institutions. It is therefore necessary, in furtherance of the public health, safety and general welfare, to impose a Fee to provide for new residential development's fair share contribution toward the expansion of the juvenile detention facilities set forth in the Public Facilities Needs Report. Thus, a reasonable relationship exists between the need for expanded juvenile detention facilities and the impacts of residential development as well as between the Fee's use and the residential development upon which the Fee will be imposed.
- n. Existing public social services facilities are inadequate and lacking in capacity to accommodate anticipated residential development in the County. There is a direct correlation between population growth, caseload growth, the number of county personnel required and the need for public social services facilities. It is therefore necessary, in furtherance of the public health, safety and general welfare, to impose a Fee to provide for new residential development's fair share contribution toward the implementation of the public social services facilities set forth in the Public Facilities Needs Report. Thus, a reasonable relationship exists between the need for public social services facilities and the impacts of residential development as well as between the Fee's use and the residential development upon which the Fee will be imposed.
- o. For determining adequate circulation capacity, the General Plan sets standards for roadway levels of service. Generally, at a minimum, level of service "C" is acceptable. However, in some instances, level of service "D" is acceptable during peak road usage. The County's road system currently meets these standards. However, existing roads and bridges, as well as operations and storage facilities are inadequate and lack capacity to provide service necessary to accommodate anticipated residential development in the County. There is a direct correlation between population growth, travel demand, traffic congestion and safety. It is therefore necessary, in furtherance of the public health, safety and general welfare, to impose a Fee to provide for new residential developments fair share contribution toward the construction of the roads, bridges, operations and storage facilities set forth in the Public Facilities Needs Report. Said facilities are recognized by and are consistent

- with the Circulation Element and the Public Facilities and Services Element of the General Plan. Thus, a reasonable relationship exists between need for these facilities and the impacts of residential development as well as between the fee's use and the residential development upon which the fee will be imposed.
- p. Existing sheriff station and jail facilities are inadequate and lack capacity to accommodate and serve anticipated residential development in the County. There is a direct correlation between population growth, the number of crimes committed, the number of county personnel required and the need for sheriff stations and jail facilities. The General Plan recognizes the need to provide adequate police protection services due to the rapid increase of crime in urban and suburban environments. In order to assure adequate police protection, the construction of new sheriff stations is necessary. In addition, approximately 1.9 jail beds per 1,000 population are needed to house inmates. It is therefore, necessary, in furtherance of the public health, safety and general welfare, to impose a fee to provide for new residential development's fair share contribution toward the construction of sheriff stations and jail facilities set forth in the Public Facilities Needs Report.
- q. As a result of population growth and the concomitant growth in workload of the courts, pressures on court facilities have increased proportionately. Anticipated population growth will place further demand on existing court facilities. It is therefore necessary, in furtherance of the public health, safety and general welfare, to impose a Fee to provide for new residential development's fair share contribution toward the implementation of the court facilities set forth in the Public Facilities Needs Report. As more fully described in the "Countywide Courts Facility Master Plan", population growth has a direct impact upon the number of filings and the number of court personnel and judicial positions. Thus, a reasonable relationship exists between the need for court facilities and the impacts of residential development as well as between the fee's use and the residential development upon which the fee will be imposed.
- r. Existing county government facilities are inadequate to accommodate anticipated residential development in the County. As population growth occurs, a need is created for the expansion of these facilities. It is therefore necessary, in furtherance of the public health, safety and general welfare, to impose a Fee to provide for new residential development's fair share contribution toward the construction of county government facilities as set forth in the Public Facilities Needs Report.
- s. The General Plan specifically recognized the need to protect sensitive, rare, endangered and threatened species of wildlife, vegetation and their habitats and preserve open space. In order to ensure the continued viability of these impacted resources, the County requires the mitigation of development-related impacts. It is therefore necessary, in furtherance of the public health, safety and general welfare, to impose a fee to provide for new residential development's fair share contribution toward the preservation of wildlife, vegetation and their habitats and open space preservation. Thus, a reasonable relationship exists between the need for preservation of these resources and the impacts of residential development as well as between the fee's use and the residential development upon which the fee will be imposed.

- t. Even though commercial and industrial development may also contribute to the need for the construction or acquisition of public facilities and the preservation of habitat and open space, the Board refrains from imposing the Development Mitigation Fee on such development at this time, and in this regard finds: (1) New development within the County has been disproportionately residential resulting in an imbalance between housing and available employment; (2) The primary cause of the need for public facilities and preservation of wildlife and vegetation is the development of residential units and resulting population growth.
- u. Even though new residential development located within the boundaries of RSA 54 may also contribute to the need for the construction or acquisition of public facilities and the preservation of habitat and open space, the Board refrains from imposing the Development Mitigation Fee on such development at this time, and in this regard finds: (1) Communities located within the boundaries of RSA 54 suffer from a depressed economy; (2) A reduction in the population residing within communities located in RSA 54 has occurred; and (3) In comparison to other areas in the County, a lower rate of development activity exists within the boundaries of RSA 54.
- v. Even though second units on existing single family lots may also contribute to the need for construction or acquisition of certain public facilities and the preservation of habitat and open space, the Board refrains from imposing the Development Mitigation Fee on such development at this time, and in this regard finds that second units: (1) Provide a cost-effective means of serving development through the use of existing infrastructure, as contrasted to requiring the construction of new costly infrastructure to serve development in undeveloped areas; (2) Provide relatively affordable housing for low and moderate income households without public subsidy; and (3) Provide a means for purchasers of new or existing homes to meet payments on high interest loans.

Section 3. DEFINITIONS. As used in this ordinance, the following terms shall have the following meanings:

- a. BOARD OF SUPERVISORS or BOARD. The Board of Supervisors of the County of Riverside.
- b. CERTIFICATE OF OCCUPANCY. "Certificate of occupancy" shall mean a certificate of occupancy as defined by Ordinance No. 457 or state law.
- c. COUNTY. The County of Riverside.
- d. CREDIT. A credit allowed pursuant to Section 11 hereof which may be applied against the Development Mitigation Fee.
- e. DEVELOPMENT AGREEMENT. An agreement entered into between the County and an owner of real property pursuant to Section 65864 et seq. of the Government Code which includes provisions requiring the payment of a Public Facilities and Services Mitigation Fee.
- f. DEVELOPMENT MITIGATION FEE or FEE. The fee imposed pursuant to the provisions of this ordinance.
- g. FACILITIES or PUBLIC FACILITIES. The terms "facilities" or "public facilities" shall mean the public facilities financed by the fee imposed pursuant to this ordinance and shall include all of the facilities set forth in the Public Facilities Needs Report and any subsequently approved revision of that Report.
- h. FINAL INSPECTION. "Final inspection" shall mean a final inspection as defined by Ordinance No. 457.
- i. RESIDENTIAL UNIT. A building or portion thereof used by one (1) family and containing but one (1) kitchen, which unit is designed or occupied for residential purposes, including single-family and

- multiple family dwellings, but not including hotels and motels.
- j. REVENUE or REVENUES. Any funds received by the County pursuant to the provisions of this ordinance for the purpose of financing the facilities set forth in the Public Facilities Needs Report, purchasing regional parkland and preserving habitat and open space.
 - k. PUBLIC FACILITIES NEEDS REPORT. The Report entitled Riverside County Public Facility Needs Through the Year 2000, which Report is on file with the Clerk of the Board.
 - l. REGIONAL STATISTICAL AREA OR RSA. The areas described and defined by Section 6 of this ordinance.

Section 4. DEVELOPMENT MITIGATION FEE. In order to assist in providing revenue to acquire or construct the facilities, purchase regional parkland and preserve habitat and open space, a Development Mitigation Fee shall be paid for each residential unit or a portion thereof to be constructed. The amount of the Fee shall vary depending upon the location of the property upon which the residential unit or a portion thereof will be constructed. Within each RSA, the following Fee shall be paid for each residential unit:

- a. RSA 45 - \$2,639.00
- b. RSA 46 - \$2,605.00
- c. RSA 47 - \$2,566.00
- d. RSA 48 - \$2,135.00
- e. RSA 49 - \$2,767.00
- f. RSA 50 - \$2,883.00
- g. RSA 51 - \$2,690.00
- h. RSA 52 - \$2,522.00
- i. RSA 53 - \$2,522.00

Section 5. FEE COMPONENTS. The Development Mitigation Fee within each RSA shall be comprised of the following components:

- a. RSA 45 - \$2,029.00 Public Facilities Fee
\$ 350.00 Regional Parkland and
Recreational Trails Fee
\$ 260.00 Habitat Conservation and Open
Space Land Bank Fee
- b. RSA 46 - \$1,995.00 Public Facilities Fee
\$ 350.00 Regional Parkland and
Recreational Trails Fee
\$ 260.00 Habitat Conservation and Open
Space Land Bank Fee
- c. RSA 47 - \$1,956.00 Public Facilities Fee
\$ 350.00 Regional Parkland and
Recreational Trails Fee
\$ 260.00 Habitat Conservation and Open
Space Land Bank Fee
- d. RSA 48 - \$1,525.00 Public Facilities Fee
\$ 350.00 Regional Parkland and
Recreational Trails Fee
\$ 260.00 Habitat Conservation and Open
Space Land Bank Fee

- e. RSA 49 - \$2,157.00 Public Facilities Fee
 \$ 350.00 Regional Parkland and
 Recreational Trails Fee
 \$ 260.00 Habitat Conservation and Open
 Space Land Bank Fee
- f. RSA 50 - \$2,273.00 Public Facilities Fee
 \$ 350.00 Regional Parkland and
 Recreational Trails Fee
 \$ 260.00 Habitat Conservation and Open
 Space Land Bank Fee
- g. RSA 51 - \$2,080.00 Public Facilities Fee
 \$ 350.00 Regional Parkland and
 Recreational Trails Fee
 \$ 260.00 Habitat Conservation and Open
 Space Land Bank Fee
- h. RSA 52 - \$1,912.00 Public Facilities Fee
 \$ 350.00 Regional Parkland and
 Recreational Trails Fee
 \$ 260.00 Habitat Conservation and Open
 Space Land Bank Fee
- i. RSA 53 - \$1,912.00 Public Facilities Fee
 \$ 350.00 Regional Parkland and
 Recreational Trails Fee
 \$ 260.00 Habitat Conservation and Open
 Space Land Bank Fee

Section 6. REGIONAL STATISTICAL AREA BOUNDARIES. The boundaries of each RSA shall be determined by the boundaries of Riverside County census tracts approved by the U.S. Department of Commerce, Bureau of Census. Said boundaries are set forth in a document entitled Riverside County Census Tracts Draft Legal Descriptions 1987, which is on file with the Clerk of the Board. The following census tracts are located within each respective RSA:

- a. RSA 45 - Census tracts 401, 402, 403, 404, 405, 406.01, 406.02.
- b. RSA 46 - Census tracts 421, 424, 425.01, 425.02, 425.03, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314.01, 314.02, 315.01, 315.02, 316, 317, 407, 408.02, 408.03, 408.04, 408.05, 409, 410, 411, 412, 413, 414.01, 414.02, 415, 416, 417.01, 417.02, 418.01, 418.02, 419.01, 422.01, 422.02, 422.03, 422.04, 423.00, 419.02, 420.01, 420.02.
- c. RSA 47 - Census tracts 426, 427.02, 427.03, 427.04.
- d. RSA 48 - Census tracts 433.01, 433.02, 433.03, 434.01, 434.02, 435.01, 435.02, 436, 437.
- e. RSA 49 - Census tracts 430, 431, 432.
- f. RSA 50 - Census tracts 438.02, 438.03, 438.04, 439, 440, 441, 442, 443.
- g. RSA 51 - Census tract 444.
- h. RSA 52 - Census tracts 445.01, 445.02, 446, 447, 448.02, 448.03, 449.01, 449.02, 449.03, 450, 451.02, 451.03, 451.04.
- i. RSA 53 - Census tracts 452.01, 452.02, 453, 454, 455, 456.01, 456.02, 457.01, 457.02
- j. RSA 54 - Census tracts 458, 459, 460, 461, 462.

Section 7. IMPOSITION OF FEE. Notwithstanding any provision of Ordinance No. 457 to the contrary, no building permit shall be issued for any residential unit except upon the condition that the Development Mitigation Fee required by this ordinance be paid.

Section 8. PAYMENT OF FEE. The Development Mitigation Fee shall be paid at the time a certificate of occupancy is issued for the residential unit or upon final inspection, whichever occurs first.

Section 9. FEE ADJUSTMENT. The Board of Supervisors may periodically review and cause an adjustment to be made to the Development Mitigation Fee. By amendment to this ordinance, the Fee may be increased or decreased to reflect changes in actual and estimated costs of the facilities, including, but not limited to, debt service, lease payments and construction costs. The adjustment in the Fee may also reflect changes in the facilities required to be constructed, in estimated revenues received pursuant to this ordinance, as well as the availability or lack thereof of other funds with which to construct the facilities. Any adjustment in the Fee will be prospective only and will become effective as of the date any such amendment is effective.

Section 10. REDUCTION FOR LOW-OCCUPANCY RESIDENTIAL UNITS. The fees required pursuant to Section 4 shall be reduced by 33.3 percent for low-occupancy residential. For purposes of this Section, low-occupancy residential units shall be limited to the following:

- a. One bedroom and studio apartments (family rooms, dens, and any similar room shall be considered to be bedrooms);
- b. Residential units in developments that are legally restricted to occupancy by senior citizens pursuant to Riverside County Ordinance No. 348 or any other applicable law.

Section 11. CREDITS. The Development Mitigation Fee required for any residential unit shall be reduced by the following credits:

- a. The Habitat Conservation and Open Space Land Bank Fee shall be reduced by the amount paid as a Coachella Valley Fringe-Toed Lizard Mitigation Fee. The applicant shall provide the Building Director with satisfactory evidence of prior payment of the Coachella Valley Fringe-Toed Lizard Mitigation Fee for the property on which a building permit is sought and the amount thereof. The Building Director shall not require the payment of the Habitat Conservation and Open-Space Land Bank Fee for residential units to be constructed on such property until the available credit has been exhausted.
- b. The Public Facilities Fee shall be reduced by the amount paid as a Public Facilities Fee pursuant to the terms of a development agreement.
- c. The Regional Parkland and Recreational Trails Fee shall be reduced by the amount paid as a Regional Parkland Fee pursuant to the terms of a development agreement.
- d. The Habitat Conservation and Open Space Land Bank Fee shall be reduced by the amount paid as a Habitat Conservation and Open Space Land Bank Fee pursuant to the terms of a development agreement.
- e. The Public Facilities Fee shall be reduced by the amount paid as a public facilities fee within the area subject to the Jurupa Community Plan.
- f. The Public Facilities Fee shall be reduced by the amount paid as a library mitigation fee within RSA 49.

- g. The County may grant to owners or developers of real property, a credit against the Development Mitigation Fee which would otherwise be charged pursuant to this ordinance, for the dedication of land or the construction of facilities. The amount of the credit granted shall be determined by an estimate of the costs of constructing such facilities or by an estimate of the fair market value of the land dedicated. The County shall review and determine the actual construction costs allowable or the actual value of the land dedicated. No credit shall be given against the Public Facilities Fee for the cost of improvements not defined herein as "facilities". Any credit granted by the County shall be given in stated dollar amounts only. An applicant for development approval may apply for credit to reduce the amount of the Fee required to be paid at the time of development approval by the County. Any credit granted and the amount of the Fee to be paid shall be included as a condition of approval for development. If an applicant has received development approval from the County and has not previously applied for a credit to reduce the amount of the Fee required to be paid, an applicant may apply for such credit with the Planning Director prior to the issuance of a building permit and the Planning Director shall make a recommendation thereon to the Board. The Board shall determine the amount of any credit to be allowed. The applicant shall be given notice of the Planning Director's recommendation and the time when the Board will consider the matter. The applicant may appear and present evidence with regard to the requested credit.
- h. The Habitat Conservation and Open Space Land Bank Fee shall be reduced by \$175.00 for each residential unit, development of which is subject to payment of the Stephens Kangaroo Rat Interim Mitigation Fee pursuant to Ordinance No. 663. The applicant shall provide the Building Director with satisfactory evidence of payment of the Stephens Kangaroo Rat Interim Mitigation Fee.
- i. The Public Facilities Fee shall be reduced by the amount paid as a Transportation Uniform Mitigation Fee within the area subject to the provisions of Ordinance No. 673. Said reduction shall not exceed \$621.00.

Section 12. EXEMPTIONS. The following types of construction shall be exempt from the provisions of this ordinance:

- a. Reconstruction of a residential unit damaged or destroyed by fire or other natural causes;
- b. Rehabilitation or remodeling of an existing residential unit, or additions to an existing residential unit.
- c. Residential units for which a building permit application was filed on or before June 6, 1988. An application shall be deemed filed for purposes of this subsection provided an application has been filed pursuant to Section 302 of the Uniform Administrative Code as incorporated in Ordinance No. 457.
- d. The location or installation of a mobilehome, without a permanent foundation, on any site. The fee required under this ordinance shall not be applicable to a site preparation permit or an installation permit for a mobilehome without a permanent foundation. No site preparation permit or installation permit for a mobilehome without a permanent foundation. No site preparation permit or installation permit for a mobilehome with a permanent foundation shall be issued after January 22, 1989, except upon the condition that the Development Mitigation Fee required by this ordinance be paid; provided however, in those instances where a site preparation permit or an installation permit has been previously issued for a site and

the Development Mitigation Fee has been paid, the fee required under this ordinance shall not be applicable to a site preparation permit or an installation permit for a mobilehome with a permanent foundation. Further, in those instances where an installation permit was issued prior to January 22, 1989 for a mobilehome without a permanent foundation and a site preparation permit or installation permit is subsequently requested for the construction of a permanent foundation for said existing mobilehome, the fee required under this ordinance shall not be applicable to the permit subsequently issued for the construction of said permanent foundation.

- e. Residential units in publicly subsidized projects constructed as housing for low-income households as such households are defined pursuant to Section 50079.5 of the Health and Safety Code.
- f. Detached Second Units pursuant to Section 18.28a of Ordinance No. 348 and Attached Second Units pursuant to Section 18.28b of Ordinance No. 348.
- g. Construction of a single family residential unit upon property wherein a mobilehome, installed pursuant to an installation permit, was previously located prior to January 22, 1989.
- h. Construction of a residential unit replacing a residential unit which has been acquired by the Metropolitan Water District for purposes of constructing its Domenigoni Reservoir.

Section 13. FEE ADMINISTRATION. All revenue received pursuant to this ordinance shall be deposited, invested, accounted for, and expended in accordance with Section 53077 of the Government Code and all other applicable provisions of law.

Section 14. VALIDITY. This ordinance and the various parts, sections and clauses thereof are hereby declared to be severable. If any part, sentence, paragraph, section or clause is adjudged unconstitutional or invalid, the remainder of this ordinance shall not be affected thereby. If any part, sentence, paragraph, section or clause of this ordinance, or its application to any person or entity is adjudged unconstitutional or invalid, such unconstitutionality or invalidity shall affect only such part, sentence, paragraph, section or clause of this ordinance, or person or entity; and shall not affect or impair any of the remaining provisions, parts, sentences, paragraphs, sections or clauses of this ordinance, or its application to other persons or entities. The Board of Supervisors hereby declares that this ordinance would have been adopted had such unconstitutional or invalid part, sentence, paragraph, section or clause of this ordinance not been included herein; or had such person or entity been expressly exempted from the application of this ordinance.

ADOPTED: 07-05-88 (Eff.: 09-03-88)
659.1 (Eff.: 01-21-89)
659.2 (Eff.: 07-06-89)
659.3 (Eff.: 08-17-89)
659.4 (Eff.: 12-24-92)

TRANSFER OF DEVELOPMENT RIGHTS

2,000 ACRES
RE-10
200 POTENTIAL PARCELS
200 "DEVELOPMENT RIGHT"
CREDITS

PROPERTY RETAINED BY OWNER
W/CONSERVATION EASEMENT
OR DEDICATED TO COUNTY
OR LAND TRUST

"SENDING SITE"

100 ACRES
R1
3 UNITS/ACRE ALLOWED
PER GENERAL PLAN
5 UNITS/ACRE POTENTIAL
WITH PURCHASE OF ADDITIONAL
"DEVELOPMENT RIGHTS"

"RECEIVING SITE"

STAFF ADVISORY COMMITTEE

RARE PLANT PROGRAM

Joy Andrews
622-8524

Bureau of Land Management
Al Franklin
985-4474

George Clark
989-6919

Dave Crosariol
638-0919

Alan Ehrgott
621-1224

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Department of Fish & Game
Ken Berg
739-4749
Julie Horenstein
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Karen Shambach
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Kirsten Tarp
978-4866

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Dick Clark
621-5355
Steve Hust
621-5355
Stephanie McBrayer
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Susan Varner
621-5355

2/93

Appendix J

***ORDINANCE 4325
El Dorado County
Public Water Planning Ordinance***



ORDINANCE No. 4325

THE BOARD OF SUPERVISORS OF THE COUNTY OF EL DORADO DOES ORDAIN AS FOLLOWS:

(UNCODIFIED)

EL DORADO COUNTY PUBLIC WATER PLANNING ORDINANCE

Section 1. New Parcels.

Upon passage of this ordinance, the County shall make purchase of a water meter mandatory for approval of all new final parcel or subdivision maps or development projects which require public water service.

Section 2. Obtain Water Data.

Within 180 days after the passage of this ordinance, and annually thereafter the County shall do the following:

1. obtain water supply and demand data from the public water agencies and districts within the County as set forth in California Government Code Sec. 65352.5;

2. provide for public review of the water data;

3. hold public hearings prior to acceptance of the water data.

Section 3. Water Plan.

Within 12 months after passage of this measure, the County shall, after holding public hearing(s), prepare a long term public water plan, to be updated annually thereafter, that includes the following:

1. an inventory of the projects and parcels being processed by the County, within each public water district, and estimates of their potential public water needs;

2. an inventory of all existing unserved parcels and projects within each public water district and estimates of their potential public water needs;

3. a water availability assessment for each public water

district that determines the adequacy of existing and planned future public water supplies to meet existing and planned future demand on these water supplies, projected over the next twenty (20) years, for all types of growth and development - residential, commercial and agricultural.

Section 4. Public Notice.

The County shall annually mail a summary of the annual public water availability assessment to all County property owners as shown on the current property tax assessment roll.

Section 5. Severability.

If any section, subsection, sentence, clause, phrase, part or portion of this ordinance is for any reason held to be invalid or unconstitutional by a final judgment of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this ordinance. It is hereby declared that this measure, and each section, subsection, sentence, clause, phrase, part or portion thereof would have been adopted or passed irrespective of the fact that any one or more sections, subsections, sentences, clauses, phrases, parts or portions be declared invalid or unconstitutional.

Section 6. Amendment or Repeal.

This ordinance may be amended or repealed only by a unanimous vote of the total authorized membership of the Board of Supervisors or by a majority of the voters voting in an election thereon.

Section 7. Tahoe Regional Planning Agency Exclusion.

This ordinance shall not apply to any projects or parcels within the jurisdiction of the Tahoe Regional Planning Agency.

Section 8. Pursuant to Elections Code section 4050, this ordinance shall take effect and shall become effective immediately upon the adoption hereof.

Section 9. By adoption hereby the Board of Supervisors has authorized the filing of a Notice of Exemption for purposes of the California Environmental Quality Act.

PASSED AND ADOPTED by the Board of Supervisors of the County of El Dorado at a regular meeting of said Board, held on the 8th day of March, 1944, by the following vote of said Board:

Ayes: Superintendant William S. Bradley
Raymond J. Nutting, J. Mark Nelson
William H. Centen, John E. Upton

Noes: none
Absent: none

ATTEST
DIXIE L. FOOTE
Clerk of the Board of Supervisors

By Thurmond E. Moody
Deputy Clerk

John E. Upton
Chairman, Board of Supervisors

I CERTIFY THAT:
THE FOREGOING INSTRUMENT IS A CORRECT COPY OF THE ORIGINAL ON FILE IN THIS OFFICE

Date _____

ATTEST: DIXIE L. FOOTE, Clerk of the Board of Supervisors
of the County of El Dorado, State of California.

By _____
Deputy Clerk

Appendix K

***PUBLIC WATER PLANNING ORDINANCE
APPROVED 1994
WATER SUPPLY AND DEMAND REPORT***

**EL DORADO COUNTY PUBLIC WATER PLANNING ORDINANCE
APPROVED 1994 WATER SUPPLY AND DEMAND REPORT**

WATER SUPPLY AND DEMAND SUMMARY

Page 1 of 3

Category	Public Water Service			Totals
	EID ¹	GDPUD ²	GFCSD ³	
I. Existing Supply/Demand Data, acre-feet/year				
A. Entitlement	49,130	N/A	N/A	49,130
B. Supply Estimate ⁴	44,100	11,200	127	55,427
C. Demand Estimate				
• Single Family Residential	10,681	1,368	110	12,159
• Multi-Family Residential	1,206	-	-	1,206
• Subagricultural	4,142	-	-	4,142
• Agricultural	5,895	4,611	-	10,506
• Commercial	1,881	259	-	2,140
• Industrial	177	-	-	177
• City	1,426	-	-	1,426
• Ditches	1,664	-	-	1,664
• Construction	83	-	-	83
• Unaccounted-for/Losses	7,663	2,468	-	10,131
• Latent	2,376	898	-	3,274
Total	37,200	9,604	110	46,914
D. Supply Balance	6,900	1,596	17	8,513
II. Existing Unserved Vacant Parcels and Projects ^{5,6}				
A. Single Family Residential				
• Parcels Less Than 5 Acres	4,443	488	791	5,722
• Parcels 5 Acres or Larger	1,871	421	18	2,310
Subtotal (Single Family Residential Parcels)	6,314	909	809	8,032
B. Multi-Family Residential	218	0	0	218
C. Other				
• Commercial	288	16	8	312
• Industrial	278	1	0	279
Subtotal (Existing Unserved Vacant Parcels and Projects)	7,098	926	817	8,841
Subtotal Estimated Potential Water Need, acre-feet/year ⁷	7,520	1,590	340	9,450
III. Increased Agricultural Demand Through the Year 2015, acre-feet/year ⁸	2,934	0	0	2,934
IV. Parcels in Approved Tentative Maps ⁹				
A. Single Family Residential				
• Approved Parcels Within EDH Specific Plan ¹⁰	1,721	N/A	N/A	1,721
• Approved Parcels Outside EDH Specific Plan ¹⁰	4,488	77	0	4,565
Subtotal (Single Family Residential Parcels)	6,209	77	0	6,286
B. Multi-Family Residential ¹⁰	0	0	0	0
C. Other ¹⁰				
• Commercial	0	2	0	2
• Industrial	0	0	0	0
Subtotal (Parcels in Approved Tentative Maps)	6,209	79	0	6,288
Subtotal Estimated Potential Water Need, acre-feet/year ¹¹	3,820	210	0	4,030

**EL DORADO COUNTY PUBLIC WATER PLANNING ORDINANCE
APPROVED 1994 WATER SUPPLY AND DEMAND REPORT**

WATER SUPPLY AND DEMAND SUMMARY

Page 2 of 3

Category	Public Water Service			Totals
	EID ^{1/}	GDPUD ^{2/}	GFCSD ^{2/}	
V. <u>Balance of Potential Single Family Parcels Within EDH Specific Plan</u> ^{1/}	4,441	N/A	N/A	4,441
Subtotal Estimated Potential Water Need, acre-feet/year ^{2/}	2,870	0	0	2,870
Number of Parcels and Projects (Categories II, III, IV, & V)	17,748	1,005	817	19,570
Estimated Potential Water Need (Categories II, III, IV, & V), acre-feet/year ^{2/}	17,144	1,800	340	19,284
VI. <u>Parcels and Projects Being Processed</u> ^{1/}				
Parcels Proposed in Tentative Maps:				
A. Single Family Residential	1,459	1,079	0	2,538
B. Multi-Family Residential	1	2	0	3
C. Other				
• Commercial	0	0	0	0
• Industrial	28	0	0	28
Subtotal (Parcels and Projects Being Processed)	1,488	1,081	0	2,569
Subtotal Estimated Potential Water Need, acre-feet/year ^{2/}	930	1,150	0	2,080
VII. <u>Specific Plan Projects Being Processed</u>				
A. Single Family Residential				
• Specific Plans Within Existing Water District Boundaries				
1. Valley View ^{1/}	836	N/A	N/A	836
2. Bass Lake	114	N/A	N/A	114
• Specific Plans Requiring Annexation				
1. Bass Lake	1,345	N/A	N/A	1,345
2. Carson Creek	2,922	N/A	N/A	2,922
3. Promontory	1,395	N/A	N/A	1,395
Subtotal (Specific Plan Projects Being Processed)	6,612	0	0	6,612
Subtotal Estimated Potential Water Need, acre-feet/year ^{2/}	4,280	0	0	4,280
VIII. <u>Potential Supplies, acre-feet/year</u> ^{1/}				
A. Storage	-	-	11	11
B. Wells	-	-	40	40
C. El Dorado Project ^{1/}	17,000	-	-	17,000
D. USBR (CVP - "Fazio Water") ^{1/ 1/}	5,625	5,625	-	11,250
E. Reduction in Unaccounted-for Water ^{1/}	1,200	-	-	
F. Reclaimed Water Through the Year 2015 ^{1/}	5,680	-	-	5,680
G. Crawford Ditch ^{1/}	1,500	-	-	1,500
Total Additional Supply	31,005	5,625	51	36,681

^{1/} Source: 1995 Update to the 1991 Water Supply and Demand Report, approved by the EID Board May 8, 1995. The water demands represent normalized consumption, as shown in Table 6 of the report. EID defines "latent water demand" as the combined anticipated demand for water by all inactive and uninstalled meters, if and when placed in service. The total estimated existing water demand has been rounded.

^{2/} Source: GDPUD 1994 Year End Water Supply and Demand Summary, April 11, 1995. The demand shown under the agricultural use category represents current irrigation water sales and includes agricultural and subagricultural uses. GDPUD defines "latent water demand" as the combined anticipated demand for water by current inactive meters plus unmetered parcels within assessment districts.

**EL DORADO COUNTY PUBLIC WATER PLANNING ORDINANCE
APPROVED 1994 WATER SUPPLY AND DEMAND REPORT**

WATER SUPPLY AND DEMAND SUMMARY

Page 3 of 3

- ^{2/} Source: Borcalli & Associates, Inc., Grizzly Flats Community Services District Water Supply Reconnaissance-Level Study, dated March 1994; and telephone conversation with William Taprell, June 20, 1994. Estimated potential water need does not include the additional demand associated with existing parcels shifting from part-time to full-time occupancy.
- ^{3/} Estimates of existing supply assume that there will be no reductions caused by future legal or regulatory changes (e.g., EPA water quality standards; new State Bay-Delta water right decisions; or hydrology different from that in the historical record). The supply estimate shown for EID represents the potential firm yield with infrastructure upgrades. The current system firm yield is 41,700 acre-feet per year.
- ^{3/} Parcels and projects that have received discretionary land use approvals. It is recognized that not all projects in Category II through V will develop, or develop to approved densities. It is further recognized that property owners have the right to develop "granny flats" on existing parcels. However, specific data regarding the number of existing flats and the associated water use are not available for estimating future demand. It is, therefore, assumed that new granny flats will develop at the historical rate, and that the unit criteria established from available residential water demand data include a factor to account for such use.
- ^{3/} Existing recorded parcels which have not been improved based upon County Assessor data (note: existing vacant parcels in EID's service area, either already having meters or for which meters have been paid, are accounted for in the estimated "Latent" demand under Category I above).
- ^{2/} Potential water needs have been estimated based upon unit water demand criteria established for each public water purveyor from historical production and consumption data. The criteria represent normalized use and include an allowance for commercial and industrial demands. Additional agricultural development has not been considered in this evaluation. The following unit water demand criteria have been used.

Purveyor	Treated Water, ac-ft/yr/DU		Untreated Water, ac-ft/yr/Account	
	Single Family	Multi-Family	Urban	Subag.
El Dorado Irrigation District				
• East Side	0.430	0.300	-	-
o City of Placerville	0.450	-	-	-
• West Side	0.550	0.330	-	-
Georgetown Divide Public Utility District	0.520	0.330	-	5.000
Grizzly Flats Community Services District	0.420	-	-	-

The potential water need for EID includes the estimated demand for the 237 existing single family residential dwelling units recently connected to the district's main water system from the Swansboro satellite service area.

- ^{3/} Agricultural water demand projections are based upon acreage growth trends established for each crop, in consultation with the El Dorado County Agricultural Commissioner, for the draft County Water Resources Development and Management Plan, dated September 1993. Crop acreage growth trends were developed using the annual agricultural crop reports prepared by the El Dorado County Department of Agriculture from 1960 through 1990.
- ^{3/} Parcels which have been authorized pursuant to EDH Specific Plan. EDH Specific Plan has been approved at 6,162 parcels. Of this, 1,721 parcels are contained within approved tentative maps.
- ^{10/} Parcels established pursuant to approved tentative maps outside the EDH Specific Plan which have not yet been recorded.
- ^{11/} Parcels and projects that require discretionary land use approvals. It is recognized that not all projects in Category VI will develop, or develop to anticipated densities.
- ^{12/} The number of single family residential parcels shown for Valley View in Category VI represents the difference between the total number of dwelling units in the Valley View Specific Plan application and the number of units associated with 272 acres of multi-family zoning already accounted for in Category II (i.e., 4,100 total dwelling units - (272 acres of multi-family zoning x 12 dwelling units per acre) = 836 remaining dwelling units).
- ^{13/} It is recognized that not all supplies may be developed, or develop to anticipated yields.
- ^{14/} Before potential supplies from the El Dorado Project and the CVP - "Fazio Water" can be made available, additional infrastructure will need to be funded and constructed.
- ^{15/} It has been assumed that the contract for the additional 15,000 acre-feet per year of water will be shared equally by EID and GDPUD, and that during dry years the supply would be reduced by 25 percent.
- ^{16/} Source: EID letter to the EDCWA, dated August 9, 1994, regarding planned future water supplies; reviewed and approved for transmittal by the EID Board of Directors on August 8, 1994. It is recognized that some of these new supply projects may not be realized, or provide the full yield proposed.

**EL DORADO COUNTY PUBLIC WATER PLANNING ORDINANCE
APPROVED 1994 WATER SUPPLY AND DEMAND REPORT**

RESIDENTIAL PARCELS AND PROJECTS DATA

Page 1 of 2

Category	Public Water Service					Totals
	EID			GDPUD	GFCSD	
	East Side ²⁴	West Side	EID Total			
II. <u>Existing Unserved Vacant Parcels and Projects</u>						
A. Single Family Residential						
• Parcels Less Than 5 Acres	2,685	1,758	4,443	488	791	5,722
• Parcels 5 Acres or Larger	1,273	598	1,871	421	18	2,310
Total Parcels	3,958	2,356	6,314	909	809	8,032
Number of Dwelling Units (@1 DU/Parcel)	3,958	2,356	6,314	909	809	8,032
B. Multi-Family Residential						
• Parcels	64	154	218	0	0	218
• Acreage	108.71	755.54	864.25	0.00	0.00	864.25
Number of Dwelling Units (@12 DU/Acre)	1,305	9,067	10,372	0	0	10,372
Total Number of Dwelling Units	5,263	11,423	16,686	909	809	18,404
IV. <u>Parcels in Approved Tentative Maps</u>						
A. Single Family Residential						
• Approved Parcels Within EDH Specific Plan	N/A	1,721	1,721	N/A	N/A	1,721
• Approved Parcels Outside EDH Specific Plan	1,474	3,014	4,488	77	0	4,565
Total Parcels	1,474	4,735	6,209	77	0	6,286
Number of Dwelling Units (@1 DU/Parcel)	1,474	4,735	6,209	77	0	6,286
B. Multi-Family Residential						
• Approved Parcels Outside EDH Specific Plan	0	0	0	0	0	0
• Acreage	0.00	0.00	0.00	0.00	0.00	0.00
Number of Dwelling Units (@12 DU/Acre)	0	0	0	0	0	0
Total Number of Dwelling Units	1,474	4,735	6,209	77	0	6,286
V. <u>Balance of Potential Parcels Within EDH Specific Plan</u>						
A. Single Family Residential						
Number of Dwelling Units (@1 DU/Parcel)	N/A	4,441	4,441	N/A	N/A	4,441
	0	4,441	4,441	0	0	4,441
Total Number of Dwelling Units	0	4,441	4,441	0	0	4,441

**EL DORADO COUNTY PUBLIC WATER PLANNING ORDINANCE
APPROVED 1994 WATER SUPPLY AND DEMAND REPORT**

RESIDENTIAL PARCELS AND PROJECTS DATA ^{1/}

Page 2 of 2

Category	Public Water Service					Totals
	EID			GDPUD	GFCSD	
	East Side	West Side	EID Total			
VI. <u>Parcels and Projects Being Processed</u>						
Parcels Proposed in Tentative Maps						
A. Single Family Residential	131	1,328	1,459	1,079	0	2,538
Number of Dwelling Units (@1 DU/Parcel)	131	1,328	1,459	1,079	0	2,538
B. Multi-Family Residential						
• Parcels	0	1	1	2	0	3
• Acreage	0.00	7.00	7.00	35.00	0.00	42.00
Number of Dwelling Units (@12 DU/Acre) ²	0	84	84	245	0	329
Total Number of Dwelling Units	131	1,328	1,459	1,324	0	2,783
VII. <u>Specific Plan Projects Being Processed</u>						
A. Single Family Residential						
• Specific Plans Within Existing Water District Boundaries						
1. Valley View	N/A	836	836	N/A	N/A	836
2. Bass Lake	N/A	114	114	N/A	N/A	114
• Specific Plans Requiring Annexation						
1. Bass Lake	N/A	1,345	1,345	N/A	N/A	1,345
2. Carson Creek	N/A	2,922	2,922	N/A	N/A	2,922
3. Promontory	N/A	1,395	1,395	N/A	N/A	1,395
Total Parcels	0	6,612	6,612	0	0	6,612
Number of Dwelling Units (@1 DU/Parcel)	0	6,612	6,612	0	0	6,612
Total Number of Dwelling Units	0	6,612	6,612	0	0	6,612

^{1/} Source: El Dorado County Planning Division, 2/6/95.

^{2/} Includes 505 existing vacant single family residential parcels and 531 single family residential parcels in approved tentative maps within the City of Placerville.

^{3/} Multi-family acreage within EID has been accounted for in Category II. Multi-family acreage within GDPUD is part of the proposed Pilot Hill Ranch development with a density of 7 dwelling units per acre. Currently, the developer has this project on hold.

TABLE 1

**EL DORADO COUNTY PUBLIC WATER PLANNING ORDINANCE
APPROVED 1994 WATER SUPPLY AND DEMAND REPORT**

**WATER DEMAND EVALUATION
EL DORADO IRRIGATION DISTRICT**

Page 1 of 2

EID Data	Increment				
	Category II	Category IV	Category V	Category VI	Category VII
EAST SIDE					
<u>Dwelling Units, DUs</u>					
• Treated Water DUs					
Single Family	3,453	943	0	131	0
Multi-Family	1,305	0	0	0	0
Subagricultural	0	0	0	0	0
Agricultural	0	0	0	0	0
Incremental Treated DUs	4,758	943	0	131	0
• Untreated Water Accounts					
Agricultural	0	0	0	0	0
Incremental Untreated Accounts	0	0	0	0	0
<u>Treated Water Demands</u>					
• Single Family					
Unit Criteria, ac-ft/DU	0.43	0.43	0.43	0.43	0.43
Demand, ac-ft/yr	1,480	410	0	60	0
• Multi-Family					
Unit Criteria, ac-ft/DU	0.30	0.30	0.30	0.30	0.30
Demand, ac-ft/yr	390	0	0	0	0
• Subagricultural					
Unit Criteria, ac-ft/DU	1.18	1.18	1.18	1.18	1.18
Demand, ac-ft/yr	0	0	0	0	0
• Agricultural					
Unit Criteria, ac-ft/DU	24.70	24.70	24.70	24.70	24.70
Demand, ac-ft/yr	0	0	0	0	0
• System Losses, ac-ft/yr	330	70	0	10	0
Incremental Treated Demand, ac-ft/yr	2,200	480	0	70	0
<u>Untreated Water Demands</u>					
• Agricultural					
Unit Criteria, ac-ft/Account	16.40	16.40	16.40	16.40	16.40
Demand, ac-ft/yr	0	0	0	0	0
• System Losses, ac-ft/yr	0	0	0	0	0
Incremental Untreated Demand, ac-ft/yr	0	0	0	0	0
<u>City of Placerville</u>					
• Dwelling Units, DUs	505	531	0	0	0
• Single Family					
Unit Criteria, ac-ft/DU	0.45	0.45	0.45	0.45	0.45
Demand, ac-ft/yr	230	240	0	0	0
• System Losses, ac-ft/yr	40	40	0	0	0
Incremental City Demand, ac-ft/yr	270	280	0	0	0
Incremental East Side Demand, ac-ft/yr	2,470	760	0	70	0

TABLE 2

**EL DORADO COUNTY PUBLIC WATER PLANNING ORDINANCE
APPROVED 1994 WATER SUPPLY AND DEMAND REPORT**

**WATER DEMAND EVALUATION
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT**

GDPUD Data	Increment				
	Category II	Category IV	Category V	Category VI	Category VII
<u>Dwelling Units, DUs</u>					
• Treated Water DUs					
Single Family	812	69	0	963	0
Multi-Family	0	0	0	245	0
Subagricultural	97	8	0	116	0
Incremental Treated DUs	909	77	0	1,324	0
• Untreated Water Accounts					
Subagricultural	130	30	0	60	0
Agricultural	0	0	0	0	0
Incremental Untreated Accounts	130	30	0	60	0
<u>Treated Water Demands</u>					
• Single Family					
Unit Criteria, ac-ft/DU	0.52	0.52	0.52	0.52	0.52
Demand, ac-ft/yr	420	40	0	500	0
• Multi-Family					
Unit Criteria, ac-ft/DU	0.33	0.33	0.33	0.33	0.33
Demand, ac-ft/yr	0	0	0	80	0
• Subagricultural					
Unit Criteria, ac-ft/DU	1.22	1.22	1.22	1.22	1.22
Demand, ac-ft/yr	120	10	0	140	0
• System Losses, ac-ft/yr	100	10	0	130	0
Incremental Treated Demand, ac-ft/yr	640	60	0	850	0
<u>Untreated Water Demands</u>					
• Subagricultural					
Unit Criteria, ac-ft/Account	5.00	5.00	5.00	5.00	5.00
Demand, ac-ft/yr	950	150	0	300	0
• Agricultural					
Unit Criteria, ac-ft/Account	72.00	72.00	72.00	72.00	72.00
Demand, ac-ft/yr	0	0	0	0	0
• System Losses, ac-ft/yr	0	0	0	0	0
Incremental Untreated Demand, ac-ft/yr	950	150	0	300	0
INCREMENTAL GDPUD DEMAND, ac-ft/yr	1,590	210	0	1,150	0

TABLE 1

**EL DORADO COUNTY PUBLIC WATER PLANNING ORDINANCE
APPROVED 1994 WATER SUPPLY AND DEMAND REPORT**

**WATER DEMAND EVALUATION
EL DORADO IRRIGATION DISTRICT**

Page 2 of 2

EID Data	Increment				
	Category II	Category IV	Category V	Category VI	Category VII
WEST SIDE					
<u>Dwelling Units, DUs</u>					
• Treated Water DUs					
Single Family	2,356	4,735	4,441	1,328	6,612
Multi-Family	9,067	0	0	0	0
Subagricultural	0	0	0	0	0
Agricultural	0	0	0	0	0
Incremental Treated DUs	11,423	4,735	4,441	1,328	6,612
• Untreated Water Accounts					
Agricultural	0	0	0	0	0
Incremental Untreated Accounts	0	0	0	0	0
<u>Treated Water Demands</u>					
• Single Family					
Unit Criteria, ac-ft/DU	0.55	0.55	0.55	0.55	0.55
Demand, ac-ft/yr	1,300	2,600	2,440	730	3,640
• Multi-Family					
Unit Criteria, ac-ft/DU	0.33	0.33	0.33	0.33	0.33
Demand, ac-ft/yr	2,990	0	0	0	0
• Subagricultural					
Unit Criteria, ac-ft/DU	1.22	1.22	1.22	1.22	1.22
Demand, ac-ft/yr	0	0	0	0	0
• Agricultural					
Unit Criteria, ac-ft/DU	27.80	27.80	27.80	27.80	27.80
Demand, ac-ft/yr	0	0	0	0	0
• System Losses, ac-ft/yr	760	460	430	130	640
Incremental Treated Demand, ac-ft/yr	5,050	3,060	2,870	860	4,280
<u>Untreated Water Demands</u>					
• Agricultural					
Unit Criteria, ac-ft/Account	28.20	28.20	28.20	28.20	28.20
Demand, ac-ft/yr	0	0	0	0	0
• System Losses, ac-ft/yr	0	0	0	0	0
Incremental Untreated Demand, ac-ft/yr	0	0	0	0	0
Incremental West Side Demand, ac-ft/yr	5,050	3,060	2,870	860	4,280
INCREMENTAL EID DEMAND, ac-ft/yr	7,520	3,820	2,870	930	4,280

TABLE 3

**EL DORADO COUNTY PUBLIC WATER PLANNING ORDINANCE
APPROVED 1994 WATER SUPPLY AND DEMAND REPORT**

**WATER DEMAND EVALUATION
GRIZZLY FLATS COMMUNITY SERVICES DISTRICT**

GFCSD Data	Increment				
	Category II	Category IV	Category V	Category VI	Category VII
<u>Dwelling Units, DUs</u>					
• Treated Water DUs					
Full-time Single Family	809	0	0	0	0
Part-time Single Family	0	0	0	0	0
Incremental Treated DUs	809	0	0	0	0
<u>Treated Water Demands</u>					
• Full-time Single Family					
Unit Criteria, ac-ft/DU	0.420	0.420	0.420	0.420	0.420
Demand, ac-ft/yr	340	0	0	0	0
• Part-time Single Family					
Unit Criteria, ac-ft/DU	0.113	0.113	0.113	0.113	0.113
Demand, ac-ft/yr	0	0	0	0	0
INCREMENTAL GFCSD DEMAND, ac-ft/yr	340	0	0	0	0

Appendix L

WATER PRODUCTION/USE DATA

West Yost & Associates

1260 Lake Boulevard, Suite 240

Davis, CA 95616

(916) 756-5905

FAX: (916) 756-5991

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DATE: 1/11/95

Project No:

TO: Greg Abramson

COMPANY/

AGENCY: El Dorado County

FAX NO: 621-5355

FROM: Wally McCullough

SUBJECT/ENCLOSURES:

Water Use in Tahoe Basin

MESSAGE:

As we discussed, here are our preliminary estimates on private water use on the California side of the Tahoe Basin. Also sent with is a map showing the three zones within the Basin as identified by the State Water Resources Control Board.

We are still evaluating public water uses which includes the State Parks and the USFS. In the 1988 Tahoe Basin Water Use Update the State Parks water use was estimated at 305 afa and the USFS water use at 916 afa.

Hope this is helpful.

Action:☒ Per Your Request☐ For Your Approval☐ For Your Review☐ Original to Follow by Mail☒ For Your Information☐ Please Reply ASAP

TOTAL NUMBER OF PAGES (INCLUDING THIS PAGE): 5

If you do not receive all pages, please call (916) 756-5905 immediately. Thank You!

South Tahoe Public Utility District

MONTHLY WATER PRODUCTION

Last Ten Fiscal Years
(in million gallons)

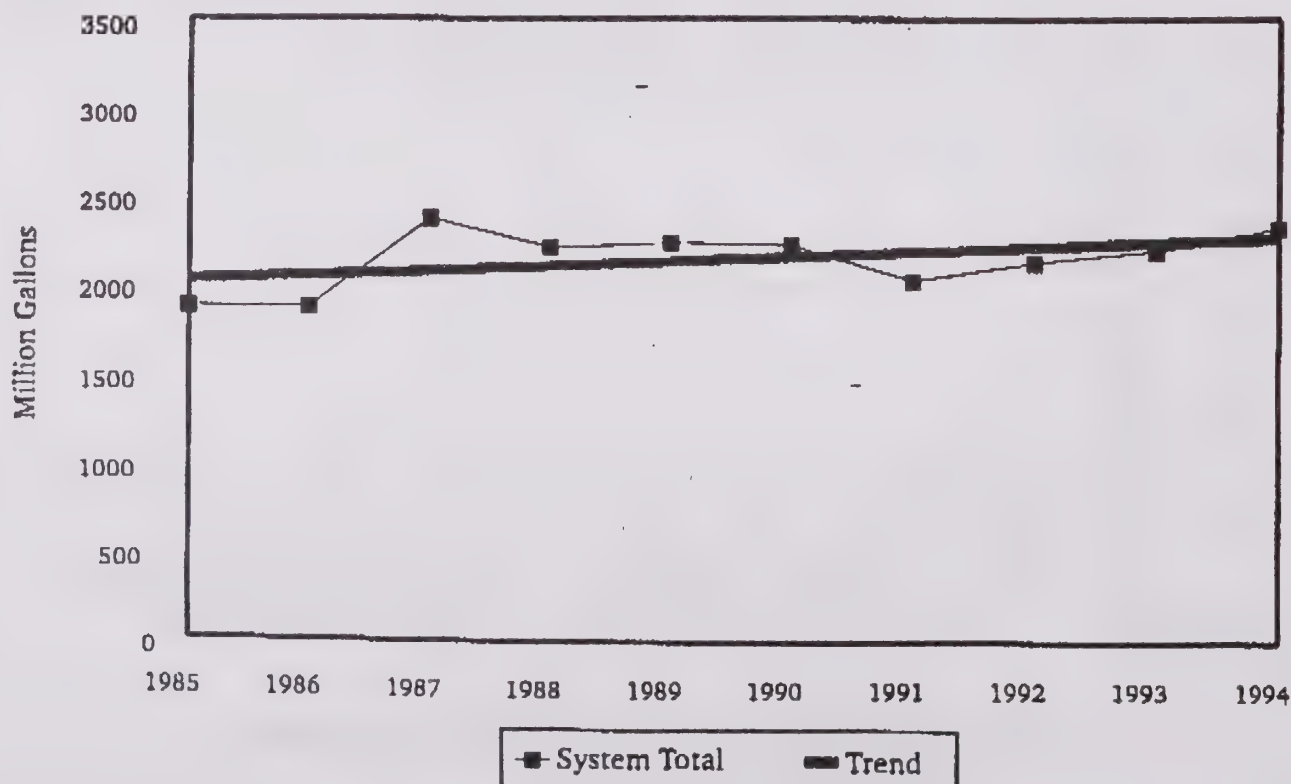
Monthly Production	94-95	93-94	92-93	91-92	90-91	89-90	88-89	87-88	86-87	85-86
July	321.36	298.28	233.84	247.09	264.79	318.21	285.59	291.06	247.13	246.82
August	330.69	297.87	256.92	241.70	264.40	266.17	261.01	321.37	247.47	253.92
September	238.86	242.72	212.91	207.70	213.70	201.87	218.46	247.30	169.05	156.57
October	160.80	153.59	185.78	185.00	187.59	146.70	182.35	196.66	119.55	119.91
November	147.19	137.25	139.96	141.08	131.68	131.50	136.30	122.94	110.66	108.03
December	142.20	155.03	137.42	145.02	173.12	135.00	152.44	159.18	119.46	125.34
January	135.86	146.49	138.58	147.76	155.51	167.28	156.55	144.91	157.21	112.35
February	128.83	118.93	119.06	122.41	124.30	148.07	161.21	129.57	137.58	110.45
March	137.27	125.48	120.32	123.41	118.80	141.54	146.25	142.86	143.54	124.27
April	124.58	137.99	124.41	137.12	108.84	143.51	148.86	143.04	161.88	121.48
May	142.23	180.69	187.23	221.55	139.69	171.47	188.10	205.20	185.33	172.78
June	215.95	274.89	221.09	209.71	210.85	219.24	235.11	208.04	249.88	220.56

Avg. Monthly Production 185.49 189.10 173.13 177.46 174.44 182.55 189.35 192.68 170.73 156.04

Average Annual Totals 2225.82 2269.21 2077.52 2129.55 2093.27 2190.56 2272.23 2312.13 2048.74 1872.48

SOURCE: South Tahoe Public Utility District Laboratory Department

Annual Water Production Trend





NORTH

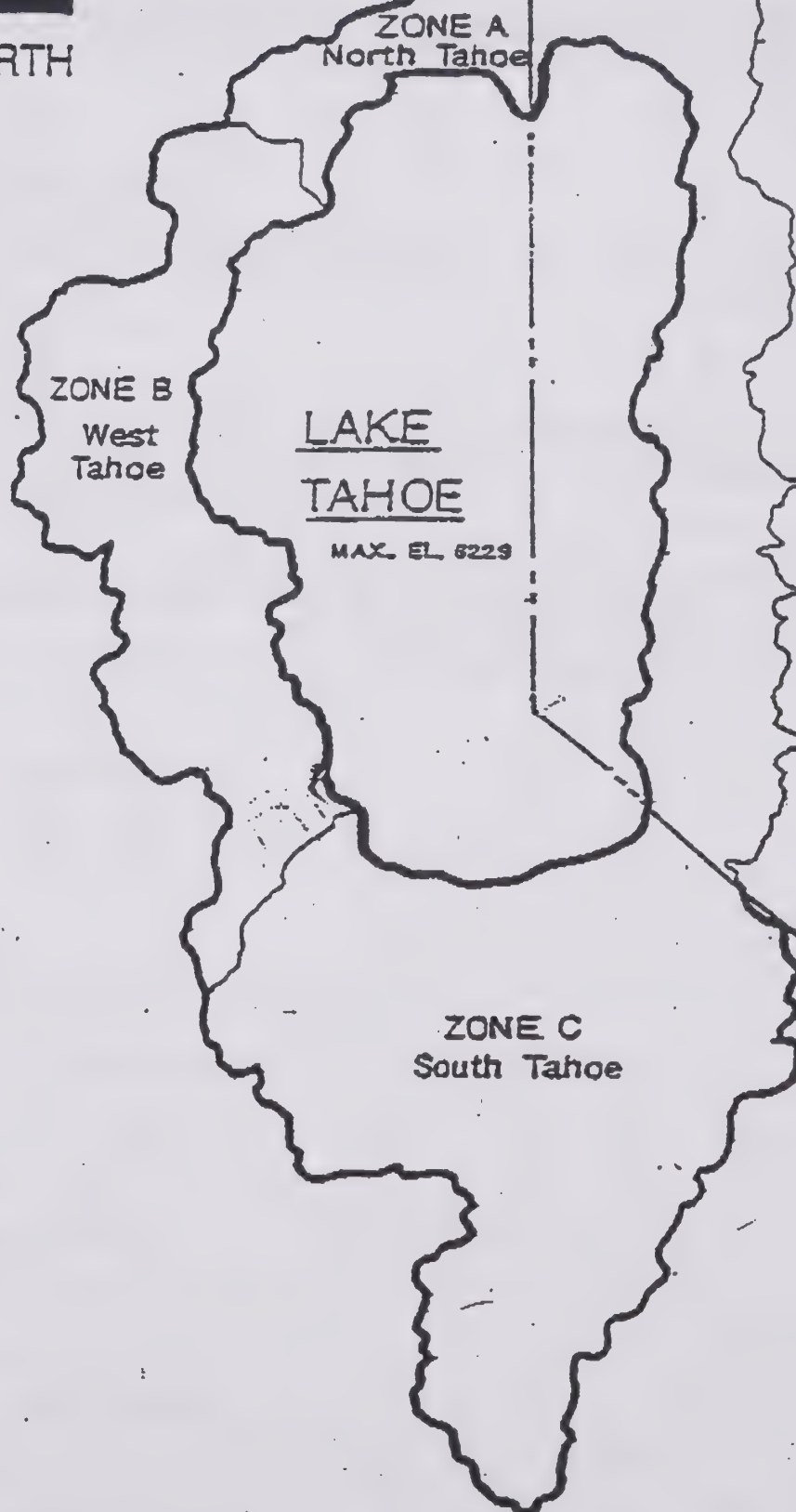


Figure 1. California Water Use Zones

(AS DETERMINED BY THE STATE BOARD)

PRELIMINARY

Table 1. Water Use on Private Lands within Zone A
(afa)

Water System	1988	1989	1990	1991	1992	1993	1994
North Tahoe PUD (a)							
Brockway Springs	238	120	75	95	0	0	10
Carnelian Woods	83	84	83	89	86	80	80
Dollar Cove	71	64	65	64	89	89	98
National Avenue	938	1,015	1,150	1,106	1,284	1,238	1,357
North Tahoe PUD subtotal	1,331	1,283	1,373	1,354	1,458	1,406	1,545
Independent Water Systems							
Agate Bay Water Company (b)	118	108	113	125	133	230	230
Brockway Golf Course (c)	136	136	136	136	136	136	136
Fulton (Main & Linkford) Water Company (b)	250	285	268	246	331	322	399
Independent Water Systems subtotal	504	529	517	507	600	688	764
Zone A Total	1,835	1,812	1,890	1,861	2,058	2,094	2,309

(a) As reported by North Tahoe Public Utility District, September, 1995.

(b) As reported by the California Department of Health Services (DOHS) Annual Reports to the Drinking Water Program. Data for 1990 estimated based on other years.

(c) Estimated from information provided by Lane Lewis, owner, August 1995.

PRELIMINARY

**Table 2. Water use on Private Lands within Zone B
(afa)**

Water System	1988	1989	1990	1991	1992	1993	1994
Tahoe City PUD (a)							
Tahoe City System	1,414	1,257	1,195	1,291	1,376	1,328	1,445
McKinney Intake	32	33	32	43	45	41	54
Riley's Spring (Alpine Peaks)	17	22	24	35	46	41	42
Rubicon #1-#2	169	163	168	172	224	197	218
Chambers Intake (c)						234	4
Quail Lake Intake (b)(c)						0	0
Quail #1 Well (b)(c)						2	0
McKinney #1 Well						26	238
Tahoe City PUD subtotal	1,632	1,475	1,419	1,542	1,690	1,869	2,001
Independent Water Systems							
Douglas Dale Lodge (d), (e)	5	5	5	5	5	5	5
Glenridge Water Company (f), (e)	15	15	15	16	16	16	16
Lake Forest Utility (g)	190	190	190	190	190	190	190
Lake Park Terrace (h), (e)	4	4	4	4	4	4	4
LakeView Water Company (i), (e)	4	4	4	4	4	4	4
Madden Creek Water Company (j)	110	117	124	116	143	159	150
McKinney Water District (j)	41	54	48	46	49	78	66
Meadow Park Water System	(k)	(k)	(k)	(k)	(k)	(k)	(k)
Meeks Bay Vista Mutual Water Company (l)	26	28	31	32	37	33	41
Nielsen Subdivision	(m)	(m)	(m)	(m)	(m)	(m)	(m)
Patterson Well (n)	1	1	1	1	1	1	1
Quail Lake Water Company (j)	42	153	177	200	(o)	(o)	(o)
Rideout School (n)	7	7	7	7	7	7	7
Tahoe Park Water Co - Skyland System	(m)	(m)	(m)	(m)	(m)	(m)	(m)
St. Michael's Woods	(p)	(p)	(p)	(p)	(p)	(p)	(p)
Tahoe Cedars Water Company (j)	310	310	248	258	281	334	360
Tahoe City Golf Course (n)	126	126	126	126	126	126	126
Tahoe Park (Washoe) Heights	(m)	(m)	(m)	(m)	(m)	(m)	(m)
Tahoe Park Water Company (j), (q)	215	215	215	215	215	215	215
Tahoe Pines Water Company	(p)	(p)	(p)	(p)	(p)	(p)	(p)
Tahoe Swiss Village Utility, Inc. (j)	196	196	196	196	196	212	212
Tahoma Meadows Water Company (n)	11	11	11	11	11	11	11
Talmon Resort Improvement District (r)	192	193	194	195	202	207	208
Tamarack Water Company	(k)	(k)	(k)	(k)	(k)	(k)	(k)
Timberland Water District (s), (e)	61	61	61	61	61	61	61
Ward Creek Water Company (n)	81	81	81	81	81	81	81

PRELIMINARY

**Table 2. Water use on Private Lands within Zone B
(afa)**

Water System	1988	1989	1990	1991	1992	1993	1994
Ward Well Water Company (t)	82	82	82	82	82	82	82
Water's Edge	(k)	(k)	(k)	(k)	(k)	(k)	(k)
Independent Water Systems subtotal	1,720	1,851	1,819	1,845	1,711	1,825	1,839
Private Diversions (n)	133	133	133	133	133	133	133
Zone B Total	3,485	3,460	3,371	3,520	3,534	3,827	3,973

- (a) As reported by Tahoe City Public Utility District, August, 1995.
- (b) Water system abandoned or shutdown.
- (c) Independent water system not acquired by TCPUD until late September 1992.
- (d) Estimated based on the number of connections as reported by Lee Hitchcock, Placer County office, August 1995.
- (e) Estimated by multiplying the number of connections by an average value of 0.4 afa/connection.
- (f) Estimated based on the number of connections as reported the California Department of Health Services (DOHS) Annual Reports to the Drinking Water Program. Data for 1990 estimated based on other years.
- (g) Estimated based on 1988 Annual Report to the Public Utilities Commission, State of California. *Water use assumed constant*
- (h) Estimated based on connections reported by Joe Lanza, November 1995.
- (i) Estimated based on connections reported by Dick Read, November 1995.
- (j) As reported by DOHS Annual Reports. Data for 1990 estimated based on other years.
- (k) System acquired by TCPUD prior to 1988. Water usage is included in TCPUD data.
- (l) Reported by Wendell R. Parker, September 1995.
- (m) Served by Tahoe Park Water Company. Water usage included in Tahoe Park Water Company quantities.
- (n) Estimated based on Brown and Caldwell, Draft "Tahoe Water Use Update", July 1988
- (o) Acquired by TCPUD in late September, 1992. Water usage is included in TCPUD data.
- (p) Served by Tahoe Swiss Village Utility. Water usage included in Tahoe Swiss Village Utility quantities.
- (q) Water usage reported as "unknown" on DOHS Annual Reports from 1989-1994.
Water usage assumed equal to 1988.
- (r) As reported by BD Secretary, Howard J. Perry, October 1995.
- (s) Estimated based on connections reported by John Ballard, November 1995.
- (t) Estimated based on connections reported by Steve McDonald, November 1995.

PRELIMINARY

**Table 3. Water Use on Private Lands within Zone C
(afa)**

Water System	1988	1989	1990	1991	1992	1993	1994
South Tahoe PUD (a)							
STPUD General	5,101	5,125	5,176	0	0	0	0
Angora System	806	842	819	761	777	850	914
Tahoe Paradise System	873	892	836	889	1,079	1,086	1,169
Airport	0	0	0	586	624	701	502
Stateline	0	0	0	3,979	4,052	4,099	4,551
South Tahoe PUD subtotal	6,780	6,859	6,831	6,215	6,532	6,736	7,136
Independent Water Systems							
Lakeside Water Company (b)	283	283	283	283	283	283	283
Tahoe Keys Water Company (c)	786	754	807	859	951	896	930
Lukins Brothers Water Company (c), (d)	101	101	101	107	147	147	147
Sewered Domestic and Recreational Systems							
Cascade Mutual Water Company (e)	15	15	15	15	15	15	15
Miscellaneous Sewered Areas (f)	47	47	47	47	47	47	47
Non-Sewered Domestic and Recreational Systems							
Fallen Leaf Mutual Water Company (g)	12	14	10	10	11	11	13
Echo Lake (f)	1	1	1	1	1	1	1
Bijou Golf Course (h)	10	10	10	10	10	10	10
Tahoe Paradise Golf Course (f)	155	155	155	155	155	155	155
Independent Water Systems subtotal	1,410	1,380	1,429	1,487	1,620	1,565	1,601
Private Diversions	490	490	490	490	490	490	490
Zone C Total	8,680	8,729	8,750	8,192	8,642	8,791	9,226

(a) As reported by South Tahoe Public Utility District, August, 1995.

(b) As reported by Lakeside Water Company. Annual data only available for 1993. Data for other years assumed equal to 1993.

(c) As reported by the California Department of Health Services Annual Reports to the Drinking Water Program. Data for 1990 estimated based on other years.

(d) For 1988-1992, water usage is reported as "none" according to DOHS water company annual report. 1988-1992 data estimated is from information obtained from the Department of Water Resources. In 1992, Lukins Bros. began serving water to the US Forest Service. The USFS water has been subtracted out.

(e) In 1995, Cascade Properties and Tallac Manor combined to form a private mutual water company. Water usage is estimated based on the report, "Water System Improvements for the Cascade Water System," July 1995.

(f) As reported by California Department of Water Resources, Draft "Lake Tahoe Surface Water Diversions and Ground Water Pumping," May 1988.

(g) As reported by Fallen Leaf Mutual Water Company, November 1995.

(h) As estimated by Bijou Golf Course manager, August, 1995.

Tahoe City P.U.D. Ground Water Supply Data

Rubicon System

1995	65,056,220 gallons	199.66 acre feet
1994	71,166,600	218.36
1993	64,132,806	196.73
1992	72,858,480	223.50
1991	64,543,360	198.08

El Dorado Irrigation District Groundwater Supply Data

Swansboro System

1994	58.3 acre feet
1993	50.4
1992	49.9
1991	38.4
1990	38.4

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